International Journal of
MANAGEMENT
and ECONOMICS

Warsaw 2014
Academic Board
Jacek Prokop (Chair), Warsaw School of Economics, Poland; Tomasz Gołębiowski, Warsaw School of Economics, Poland; Sándor Kerekes, Corvinus University of Budapest, Hungary; Bożena Leven, The College of New Jersey, USA; Rajiv Mehta, New Jersey Institute of Technology, USA; Ryszard Rapacki, Warsaw School of Economics, Poland; Katharine Rockett, University of Essex, Great Britain; Jian Shi, Sichuan University, China; Adam Szyszka, Warsaw School of Economics, Poland; Christine Volkmann, Wuppertal University, Germany; Charles V. Wait, Nelson Mandela Metropolitan University, South Africa; Marzanna Witek-Hajduk, Warsaw School of Economics, Poland

Editorial Board
Jolanta Mazur – Editor in Chief
Krzysztof Falkowski – Vice Editor
Lidia Danik – Managing Editor

Theme Editors
Jolanta Mazur, Krzysztof Falkowski, Lidia Danik

Linguistic Editors
Bożena Leven, Jolanta Mazur

Editorial Office
Collegium of World Economy, Warsaw School of Economics
02-554 Warszawa, al. Niepodległości 162
tel. 22 849 50 84, fax 22 646 61 15

© Copyright by Warsaw School of Economics, Warsaw 2014
The journal is also available on-line at: http://bazhum.icm.edu.pl; www.e-wydawnictwo.eu

ISSN 2299-9701

Publisher
Warsaw School of Economics – Publishing Office
02-554 Warszawa, al. Niepodległości 162
www.wydawnictwo.waw.pl, e-mail: wydawnictwo@sgh.waw.pl

DTP
Gemma

Print
QUICK-DRUK s.c.
tel. 42 639 52 92
e-mail: quick@druk.pdi.pl

Order 164/XI/14
Contents

Editorial ................................................................. 5
Jolanta Mazur

Trade Openness, Economic Growth and the Vicissitude of Labor-intensive Industries: The Case of China ......................................................... 7
Ma Ying, Li Jing, Yu Guansheng, Yuan Dongyang

Emotional Intelligence – Sales Performance Relationship: A Mediating Role of Adaptive Selling Behaviour ................................................. 32
Zazli Lily Wisker, Athanasios Poulis

CSR and Financial Performance: The Case of Polish Small and Medium Manufacturers ............................................................. 53
Piotr Zaborek

How to Investigate Polish Clusters’ Attractiveness for Inward FDI? Addressing Ambiguity Problem ......................................................... 74
Marta Götz, Barbara Jankowska, Cezary Główka

Relationship Between Competitive Strategies and the Success Perception of Polish Born Globals ..................................................... 94
Ewa Baranowska-Prokop, Tomasz Sikora

Do Legal Barriers Really Protect the Labor Markets? Empirical Evidence of Polish Migrants after 2004 .......................................... 114
Michał Schwabe
Welcome to the *International Journal of Management and Economics*, issue number 43. The papers in the current issue of our Journal cover a range of research problems and empirical perspectives. The two disciplines, i.e. economics and management are equally and strongly represented.

The first article, “Trade Openness, Economic Growth and the Vicissitude of Labor-intensive Industries: The Case of China”, was written by Ma Ying, Li Jing, Yu Guansheng – Chinese professors from three different universities who were supported by Yuan Dongyang, the representative of the Chinese banking industry. Their major focus was the relationship between China’s trade openness, economic growth, and the structural change of labor-intensive industries between 1986 and 2008. The analysis of empirical data led the authors to the following conclusions: (a) trade openness resulted in an acceleration of China’s economic growth, though at the same time labor-intensive industries were negatively impacted; (b) economic growth positively impacted trade openness, but again the negative influence on labor-intensive industries’ development was observed; and (c) the development of labor-intensive industries was related to negative results in economic growth and trade openness. They concluded from the results of the analysis that labor-intensive industries should be scaled down to improve the efficiency of resource allocation, and technology-intensive industries should increase their share in China’s exports.

The second article, representing the group of studies in management discipline, “Emotional Intelligence – Sales Performance Relationship: A Mediating Role of Adaptive Selling Behaviour”, by Zazli Lily Wisker and Athanasios Poulis, reveals the role of adaptive selling behaviour as a mediator impacting the relationship between emotional intelligence and sales performance. The analysis of data collected from 281 sales people offering financial services in Malaysia brought the authors to conclude that emotionally intelligent individuals are flexible and able to monitor the feelings and emotions of others, and use this ability in the communication processes with customers, which supports the relationship between the parties. Moreover, the authors proved a positive relationship between emotional intelligence and adaptive selling behaviour, suggesting several managerial implications of the mentioned relationship.
The relationship between Corporate Social Responsibility activities and companies’ financial performance was explored in the next paper, entitled “CSR and Financial Performance: The Case of Polish Small and Medium Manufacturers” by Piotr Zaborek. The topic is an exceptionally interesting one, as previous research has developed very contradictory evidence. One hundred eighty-seven managers of SMEs operating in Poland in the food, beverage and cosmetics industries were surveyed. The findings, gleaned from developing and testing a structural model, revealed a weak, but statistically significant positive correlation between companies’ CSR involvement and sales profit margins, but a discernible direct effect of CSR on ROA was identified.

The question “How to Investigate Polish Clusters’ Attractiveness for Inward FDI? Addressing Ambiguity Problem” was asked by Marta Götz, Barbara Jankowska and Cezary Główka. The objective of this exploratory, qualitative research was to assess how Polish cluster organization managers perceive clusters attractiveness for foreign investors. The authors focused on conceptualizing the problem of ambiguous cluster attractiveness for foreign investors and operationalizing cluster attractiveness. They advocate that the grounded theory method could be implemented in future cluster research.

The aim of the paper entitled “Relationship between Competitive Strategies and the Success Perception of Polish Born Globals”, by Ewa Baranowska – Prokop and Tomasz Sikora was to study competitive strategies implemented by the so called Born Globals located in Poland. The classification of strategies was based on Porter’s division into two sources of competitive advantage; the cost-leadership and product differentiation strategies. Having analyzed the data obtained from 256 small and medium Polish enterprises, the authors found out that Polish Born Globals implemented both of the classic strategies. Additionally, some Born Globals design their own, combination strategies. Most company managers declared their international performance satisfactory.

Michał Schwabe’s objective was to answer the question “Do Legal Barriers Really Protect the Labor Markets?” and supported his answer with “Empirical Evidence of Polish Migrants after 2004.” His focus was on legal and policy barriers blocking immigrant access to foreign labor markets, in the international migration process. The data analyzed concerned Polish international temporary emigrants in the years 2000–2012. This period included both the period before Poland’s accession to the EU and the post – accession period, when certain countries gradually removed intervening obstacles. The author found the influence of intervening obstacles on Polish migration to EU countries insignificant. He contends that opening of EU labor markets played a much smaller role in influencing migration processes than the EU-15 business cycle. The data analysis suggested that the business cycle of the destination country was the major factor impacting migration inflows.

I hope readers will enjoy reading the papers included in the current issue.
Trade Openness, Economic Growth and the Vicissitude of Labor-intensive Industries: The Case of China

Abstract

In this paper, we use China’s 1986-2008 data to make an empirical analysis on the interrelationship between trade openness, economic growth and the structural change of labor-intensive industries by using simultaneous equation models and a VAR model. Our empirical study leads to the three conclusions. First, trade openness has accelerated economic growth, though with some negative impact on the development of labor-intensive industries; Second, economic growth has had a positive effect on trade openness, but again negatively impacted the development of labor-intensive industries. Third, the expansion of labor-intensive industries has had negative effects on both trade openness and economic growth.

Methodologically we rely on the transformation theory of industrial structure as an analytical framework to empirically study these three paradoxical outcomes. We introduce the three variables: trade openness, economic growth and the change of labor-intensive industries, as dependent as well as independent variables into our empirical
models. And then we use technological progress, the share of secondary industries to GDP, total employment and investment ratio as control variables in order to test the robustness of the empirical results. In addition to explaining the factors responsible for changes in labor-intensive export industries we also provide two policy implications: First, labor-intensive industries should be scaled down to improve the efficiency of resources allocation. Second, China should timely transform its industrial structure of the export sectors from the one that is dominated by labor-intensive industries to the one that is dominated by capital (technology)-intensive industries so as to induce the export sectors to move in the direction favorable to the transformation of China's present outward pattern of economic development.

**Keywords:** trade openness; economic growth; labor-intensive industries; transformation of outward pattern of economic development; simultaneous-equations model; VAR model

**JEL:** F14; F43; L16; L52

### Introduction and Literature Review

In this paper, we empirically analyze the systematic relationship between trade openness, economic growth and the structural change of labor-intensive exporting industries in China. In this paper, labor-intensive export industries are defined as those industries that mainly rely on utility of a great quantity of labor force instead of relying on technology and equipment to a greater extent, such as textile, apparel, toys, leather and fur products, and furniture etc. In China, most of products made by these industries are exported.

Historically, China’s high rate of economic growth was highly correlated with trade openness and the development of labor-intensive export industries. From 1979 to 2006 China’s imports and exports contributed to its average growth rate of 17.2%. In 2005 China surpassed Germany and its amount of foreign trade ranked the third in the world. In 2009 China outstripped Japan and became the second largest trading country with a total amount of $2203.7 billion. In 2013, China became the world’s biggest country of goods trade.

Our goal is to investigate the changes in China’s exports from labor-intensive industries in the period 1986 to 2008; in the years before and after its accession into the WTO. In order to better understand the vicissitude of labor-intensive industries and other factors responsible for growth and structural transformation we build up simultaneous equation models, employ regression analysis and a VAR model.

The relationship between trade openness, economic growth and vicissitude of industrial structure has been widely analyzed in the economic literature. More recent studies enrich such analyses by adding a question of concurrent transformation of industrial
structure from the labor (resource)-intensive type to the capital (technology)-intensive one. S. Kuznets [1966; 1971] pioneered his research on the relationship between economic growth and the change of economic structure in the countries with different factor endowments.

H. B. Chenery, S. Robinson and M. Syrquin [1986] offered a standard analytical framework for researching the relationship between industrial structure and economic growth. It implied that with the growth of income per capita, upgrading the share of modern manufacturing to that of traditional agriculture would boost economic growth in developing countries. M. Syrquin [1988] extends this analytical framework to a long-run process of structural transformation that includes industrialization, urbanization and agricultural transformation, as well as the shifts of such behavioral relations as accumulation of physical and human capital, the composition of demand, employment, production, saving, trade etc. However, this analytical framework does not address the detailed mechanisms of how factor endowments enter the process of structural transformation. Neither does it explain how factor endowments, economic growth and the shifts of behavioral relations interact with one another to finally attain the structural transformation.

Since 1990s, there has emerged an increasing amount of literature trying to explain the influences exerted by economic growth and shifts of behavioral relations (in particular, technological change and investment in human capital) on the structural change. S. Redding [1996] studies the relationship between investment in human capital and in R&D which determines long-run rate of growth. He shows that the two kinds of multiple equilibria characterized by low-skill and low-quality traps may arise due to the two kinds of investment in the manufacturing sector exhibiting indivisibilities, pecuniary externalities and strategic complements. It seems to him that expectation will determine which equilibrium to select, so there exists a potential role for government policy in accelerating growth by coordinating expectation.

A. Acemoglu [2000] introduces the price effects and the market size effect into his analysis in order to check whether a technical change is biased towards particular factors. He shows that the former encourages innovation favoring scarce factors so as to develop the technologies to produce expensive goods, while the latter leads to a technical change directed at abundant factors so as to employ the technologies that have a larger market. According to him, the relative strength of the two effects is determined by the elasticity of substitution between the factors; profit-seeking motive determines the amount of R&D directed at different factors and different sectors shapes the direction of a technical change and determines the equilibrium bias of technology; the form of the innovation possibilities frontier determines how relative costs of different types of innovation changes with the current state of technology.

How human capital is contributed to economic growth has been discussed ever since 1960s, but how human capital is correlated with a structural change is a subject appearing in the literature pretty recently. In an overlapping generation model, K. Yuki [2008]
points out that both, the shift of production, employment and consumption from the traditional sector to the modern sector and the extent of education of the population, are the sources for the economic development. He argues that, for a successful structural change, an economy must start with an initial wealth distribution that enables a sufficient proportion of the people to receive education. Once an economy takes off, a structural shift and human capital accumulation continue until the economy reaches a steady state with high income and equal distribution. If an economy does not succeed in a structural shift, thus sufficient productivity of the traditional sector becomes a prerequisite for economic development.

D. Nicet-Chenaf and E. Rougier [2009] find that if human capital is misallocated or unemployed, the demand for particular skills in the modern sector is too low relative to the disposable amount of human capital on the market. An increase in human capital has no remarkable effect on economic growth. It is particularly true in those economies that have fallen into a low-level development trap for lack of investment in equipment and with a bad allocation of labor and skills across the sectors. The effect of education on economic growth will be more significant if the economy has entered into a structural change that increases the demand for skilled labor. Their econometric evidence has shown that the reduction in the traditional share to GDP and a higher diversification of export will have a positive impact on economic growth. So, the authors pay a particular attention to the role of entrepreneurs to increase demand for skills in the modern sector.

Based on the data of 28 OECD countries, M. Peneder [2003] aims for an empirical research on the effect of the structural change on aggregate income and growth. In his paper, three mechanisms for the linkage between meso-structure and macro-performance are identified. (1) the sectoral difference in the income elasticity of demand shifts industry shares in overall consumption. (2) the positive relationship between a structural change and economic growth can be called structural bonus which postulates an upgrade from industries with lower value added per labor input to those with higher. (3) the negative effect of a structural change on growth can be attributed to structural burden which shift labor force away from industries with high productivity growth to industries with low productivity growth. He also recorded the three stylized facts of the sectoral change. (1) The share of the service sector is positively correlated with income level, but its lagged levels have negative impacts on GDP per capita and the annual growth rate. (2) As for the technology-driven and high-skill manufacturing sector, its lagged levels and first differences for the shares of total exports relative to the OECD countries exert a significantly positive effect on the level of GDP per capita and economic growth. (3) Both increase in exports and in imports, and hence the application of technological advanced products contributes positively to growth.

A structural change is bound to connect an industrial policy which is a magic key that leads the East Asian Economies, in particular South Korea, to a great success in economic development. Many economists have summarized Korea’s successful lessons, L.E. Weatphal
is one of the representatives. He [1990] writes that Korea's so-called industrial policy is in fact a package of policy tools, including taxes and subsidies, credit rationing, various kinds of licensing, public announcements, creation of public enterprises, continuously designing and implementing the plans for the targeted industries etc. He evaluates that the magic key of Korea’s industrial policy lies in how these policy tools have been used: either neutrally used to encourage export or non-neutrally used to promote infant industries and what the Korea’s government do is, on the market well-functioning basis, to selectively intervene so as to indirectly affect allocation of resources among industries and to achieve dynamic efficiency in the sense of attaining Korea’s international competitiveness in the targeted industries.

Industrial policy has brought forth a huge success to Korea. In 1960 Korean economy was dominated by agriculture and mining. It has taken 30 years for Korea to complete the enhancing process of industrial structure. Now, Korea has become the world 11th largest economy and one of the main exporters of technology-intensive goods (such as semiconducting products including smart cellphone, computer, and automobiles and components). In 2013, South Korea ranked the third place among the world largest 10 export economies.

J.Y. Lin [2012] also summarizes the successful experiences of the East Asian economies, demonstrating that a country’s comparative advantage and an optimal industrial structure are determined by factor endowments. Transformation of industrial structure of a country requires changing the focus of factor endowment flows from labor-intensive or natural resources driven to more capital intensive industries. Consequently, Lin predicts that labor-intensive industries in China and other emerging market economies will be losing comparative advantages.

Since the late 1970s, the transformation of industrial structure has been one of the key factors facilitating China’s high rate of economic growth. Thus, many Chinese economists focus not only on changing China’s industrial structure, but also on the vicissitude of China’s labor-intensive industries. W. Liu and S.R. Li [2002] conclude that China’s economic growth was mainly fueled by the tertiary industry, which reduced the role of primary and secondary industries. W. Li and H. Zhang (2008) argue that the alternation of priority in three types of industries has significantly increased China’s economic growth, though the magnitude of the effect is gradually diminishing.

By introducing the industrial structure into a framework of stochastic frontier production function, R.G. Zheng, C.H. Gan and D.F. Yu, [2010] discover that the adjustment of industrial structure has caused both short-run and long-run effects on economic growth. However, when it comes to the allocation of resources its impacts is limited to the short-run. Following findings by H. Sun and Z.X. Shi [2011], the adjustment of industrial structure has a significant Granger impact on economic growth. Therefore, an industrial policy to restructure and optimize the industrial structure is an active and effective way to promote economic growth in China.
In addition, some people dispute on whether the “Hypothesis of Structural Bonus” is tenable for China’s case. X.P. Li and X.X. Lu [2007] argue that the structural change in China’s manufacturing sectors has not led to the emergence of “structural bonus” because the resources such as labor and capital have not been allocated to those highly efficient industries. C.H. Gan and R.G.. Zheng [2009] show that only the allocation of labor among these industries has surely created the *structural bonus*, but the allocation of capital among these industries has not.

There is a heated debate on the historical role played by labor-intensive industries in promoting export and growth and on the impact made by labor-intensive industries on enhancing industrial structure in the literature on China’s labor-intensive industries. Some Chinese economists uphold that China’s labor-intensive industries should continue to develop.

D.W. Wang, M.Y. Wang and L. Chen [2004] point out that since China’s entry into WTO and with the gradual fall of the proportion of traditional capital-intensive heavy industries and the rapid growth of labor-intensive light industries, China’s industrial structure has even more conformed to its structure of factor endowments. They argue in favor of developing the light industrial sectors and labor-intensive industries as the major direction of China’s adjustment of industrial structure.

According to X.D. Zhang & J.W. Sun [2006], since 1990s, China’s international competitiveness in technology (capital)-intensive industries has been rising while China’s international competitive advantage of traditional labor-intensive industries has been declining. However, comparative advantage in labor still plays a key role in some productive links (such as processing or assembly) to upgrade the international competitiveness of technology (capital)-intensive industries. They believe that the vertical specialization of global division of labor is an effective means that enables the *effects of technological spillovers* and *effects of industrial linkage* to display in China’s labor-intensive industries; enhancing the quality and efficiency of labor, generating a *win-win* outcome for both developed and developing countries.

According to F. Cai and D.W. Wang [2009], by extending the “Flying Geese Pattern” into inland China, China will maintain its comparative advantage and international competitiveness of the labor factor while conducting industrial transfers within different regions. According to this pattern, the advanced east regions will adjust the structure of the competitive advantage to the rising labor costs and the middle and western regions will accept labor-intensive industries transferred from the east regions, thus leading to nation-wide sustainable development.

G. Li, K.T. Shen and C.X. Guo [2009] point out that the implementation of “New Labor Contract Law” will speed up the trend of substitution of capital for labor. In this process, protecting wages from a decline is critical, which requires increase in wages of the high-skilled workers. G. Li, J.H. Liao and Y.N. Xiang’s research [2011] shows that for more than 30 years, despite quantitative changes in China’s factor endowments, the qualitative
change has not happened and China’s comparative advantage still rests on labor-intensive products. They expect that before the year of 2025, China will follow the principle of comparative advantage and labor-intensive industries will grow even faster.

Other Chinese economists argue that China should seize the opportunity to reshuffle the industrial structure of export in order to transform the present outward pattern of economic development. B.Q. Ren, H.W. Huang and J.Y. Xu [2005] admit that since late 1970s, China’s strong export was profited by the extensive expansion of labor-intensive export industries based on cheap and unskilled rural labor, low labor productivity and low added value. In late 1990s, when the global IT industry transferred the added value chains into China, China’s high-tech industries represented by IT industry were catching up and a series of high-tech export goods replaced traditional labor-intensive products. Since 2005, the wages of labor began rising while labor productivity began to decline. The authors argue that China faces an opportunity to rebuild its industrial structure; however it also faces the danger of “trap of comparative advantage”.

In researching changes in industrial structure, Y. Xu and E.Z. Zhang [2008] use input-output-table data to calculate outsourcing ratio of China’s 35 manufacturing industries. They find that outsourcing has served as a fine converter to enhance industrial structure because it has not only introduced capital-saving technologies, but also has led the industrial structure to change from a labor-intensive one into a capital-intensive one.

M.Z. Zhang and M. Li [2011] analyze the impact of global division of labor in the context of vertical specialization on China’s industrial upgrading. They find that intra-industry upgrading deviates from inter-industry upgrading in China and the process of global vertical specialization has made positive effects on inter-industry upgrading, but negative effects on intra-industry upgrading. Since 1990s, the international competitiveness of China’s labor-intensive industries has shown a falling trend while the international competitiveness of China’s capital (technology)-intensive industries (such as manufacture of office work and communication equipment, manufacture of machinery and transportation equipment etc.) has followed a rising trend. They conclude that in the context of vertical specialization in global division of labor, industrial upgrading is not just limited to the industrial shift from labor-intensive industries to capital (technology)-intensive industries in the sense of final products, but in the sense of escalating along the product value-added chains within the same industry. If China neglects the escalating along the intra-industry value-added chains, she will be captured in the “low level trap of comparative advantage”.

J. Wang and X.Z. Zhang [2012] demonstrate that just like oil and other natural resources, unduly abundant labor resources sometimes generate the “effects of resource curse”. Their empirical work shows that China’s labor-intensive industries rely on large input of capital and intermediate goods to produce cheap goods for export, and in this way, they use capital which should has been invested into capital (technology)-intensive industries. That approach impedes technological innovation, and hinders the employment
of high-skilled workers. Consequently, from a long-term perspective, they declare that the excessive growth of labor-intensive industries is unfavorable to China's economic development.

As indicated in the above literature review, the question whether and/or how China's labor-intensive industries should continue to develop has been widely debated. In this paper, we adopt the transformation theory of industrial structure as an analytical framework to empirically examine the process of vicissitude of China's labor-intensive export industries. We explain the factors that gave impetus to the growth of labor-intensive export industries, and reasons for China to start a new industrial upgrading and transforming the industrial structure for export from labor-intensive industries to capital (technology)-intensive industries.

In the following Section 2 the sample description and empirical models are presented, and; empirical analysis and the testing results are unfolded in Section 3. Main conclusions and policy implications are provided in Section 4.

Sample Specification and Empirical Models

As mentioned above, this paper analyzes the systematic relationship between trade openness, economic growth and the structural change of labor-intensive export industries in China. In order to better understand the co-relations between these variables, we have drawn the following Figure 1. This Figure provides the key points: (1) Economic growth and the proportion of labor-intensive industries in gross output value show inverse relation; (2) Throughout most of the examined period, economic growth and trade openness show a direct relation; (3) The share of labor-intensive industries in gross output value is declining while the trade openness is changing irregularly.

In this paper, we focus primarily on points one and three. In Figure 1 the year of 2002 when China entered the WTO can be taken as a watershed. Before 2002 trade openness as a whole was relatively stable, but after 2002 it displayed a tendency of increasing ascendant. Until 2008 when the world financial crisis broke out, trade openness demonstrated a sudden decline. The share of labor-intensive industries in gross output value was increasing till 1994. This implied that labor-intensive industries had made a great contribution to GDP growth from mid-1980s to mid-1990s. After 1994, these industries demonstrated an asymptotically decreasing trend. This change suggested that the contribution of labor-intensive industries to GDP growth was diminishing. Comparatively, the share of secondary industries in gross output value exhibited two slight upswings around 1993 and 2006, but it stayed relatively stable during the whole examined period.
Based on the above observations, we would like to test two hypotheses:

H1. Economic growth and trade openness are positively correlated, i.e., economic growth stimulates trade openness while trade openness fosters economic growth.

H2. Both, economic growth and trade openness are unfavorable to the development of labor-intensive industries, while the development of labor-intensive industries is unfavorable to both economic growth and trade openness.

For the purpose of investigating the changes of China’s labor-intensive export industries in the context trade openness and GDP growth, we develop empirical models. Besides the three variables above-mentioned, we introduce control variables so as to reflect the real connection between different variables and to increase the robustness and validity of our empirical models. Specifically, we use trade openness, economic growth and the share of labor-intensive industries as dependent variables. For each empirical model, only one of the three is selected as the dependent variable, the other two, together with the control variables, are used as the independent variables. In this paper, the real GDP per capita, technological progress, the share of the secondary industries in gross output value, total employment, investment rate are all used as control variables. The empirical models are constructed as follows:

\[ L_{STR} = a_0 + a_1 TR_{OPEN} + a_2 P_{GDP} + \gamma x + \varepsilon_1 \]  
(1)

\[ P_{GDP} = \phi_0 + \phi_1 L_{STR} + \phi_2 TR_{OPEN} + \gamma x + \varepsilon_2 \]  
(2)

\[ TR_{OPEN} = \psi_0 + \psi_1 P_{GDP} + \psi_2 L_{STR} + \gamma x + \varepsilon_3 \]  
(3)
Where, $x_i$ denotes the control variables, and the symbols, economic interpretations and statistical properties of all these variables are listed in the following Table 1 and Table 2.

### TABLE 1. The construction of variables and their specification

<table>
<thead>
<tr>
<th>variables</th>
<th>symbols</th>
<th>specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of labor-intensive industries in gross output value</td>
<td>L_STR</td>
<td>measured by the proportion in gross output value of labor-intensive industries of the manufacturing sectors including the State-owned Industrial Enterprises and the Industrial Enterprises above the Designated Size$^3$</td>
</tr>
<tr>
<td>Real per capita GDP</td>
<td>P_GDP</td>
<td>deflated by the 1978 price level in order to measure the real economic growth</td>
</tr>
<tr>
<td>Trade openness</td>
<td>TR_OPEN</td>
<td>measured by the ratio of total volume of import and export trade over GDP</td>
</tr>
<tr>
<td>Technological progress</td>
<td>TEC</td>
<td>measured by the number of patent applications</td>
</tr>
<tr>
<td>Proportion of the secondary industries in gross output value</td>
<td>SEC</td>
<td>measured by the proportion of gross output value of the secondary industry to GDP to reflect the industrial structure at the levels of the primary-secondary-tertiary industries</td>
</tr>
<tr>
<td>Total employment</td>
<td>WORK</td>
<td>to measure the effect of changes of numbers of the employed persons on the structure of labor-intensive industries</td>
</tr>
<tr>
<td>Investment rate</td>
<td>INV</td>
<td>measured by the share of total fixed capital investment to GDP</td>
</tr>
</tbody>
</table>

**Source:** own elaboration.

### TABLE 2. Statistical properties

<table>
<thead>
<tr>
<th></th>
<th>L_STR</th>
<th>P_GDP</th>
<th>TR_OPEN</th>
<th>WORK</th>
<th>INV</th>
<th>SEC</th>
<th>TEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.186007</td>
<td>3.264244</td>
<td>0.407113</td>
<td>4.83325</td>
<td>45.5507</td>
<td>45.5507</td>
<td>5.046904</td>
</tr>
<tr>
<td>Median</td>
<td>0.183261</td>
<td>3.242845</td>
<td>0.363084</td>
<td>4.846506</td>
<td>37.7</td>
<td>46.0906</td>
<td>4.968954</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.231261</td>
<td>3.811123</td>
<td>0.668217</td>
<td>4.892067</td>
<td>47.7</td>
<td>48.92187</td>
<td>5.943302</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.149557</td>
<td>2.847576</td>
<td>0.244575</td>
<td>4.709965</td>
<td>34.8</td>
<td>41.34065</td>
<td>4.136086</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.025233</td>
<td>0.307433</td>
<td>0.136082</td>
<td>0.054052</td>
<td>3.445592</td>
<td>1.99011</td>
<td>0.498838</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.077745</td>
<td>0.232715</td>
<td>0.759347</td>
<td>–1.10979</td>
<td>0.706253</td>
<td>–0.54455</td>
<td>0.138379</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.819461</td>
<td>1.85166</td>
<td>2.315272</td>
<td>3.137616</td>
<td>2.624951</td>
<td>2.406867</td>
<td>2.139081</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1.417849</td>
<td>1.535311</td>
<td>2.775285</td>
<td>4.945485</td>
<td>2.135836</td>
<td>1.537949</td>
<td>0.817776</td>
</tr>
<tr>
<td>Probability</td>
<td>0.492173</td>
<td>0.4641</td>
<td>0.249663</td>
<td>0.084353</td>
<td>0.343723</td>
<td>0.463488</td>
<td>0.664389</td>
</tr>
<tr>
<td>Observations</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

The reasons why we choose these variables and the ways how we define them are as follows:

**L_STR** indicates the proportion of labor-intensive industries, measured by the proportion in gross output value of the State-owned Industrial Enterprises and the Industrial Enterprises above the Designated Size in China’s labor-intensive industries of manufacturing sectors. In this paper, we use the words *proportion, share, structural change or development* alternatively to express the two connotations of this indicator: (1) The positions which these industries have taken in Chinese industrial structure; (2) To what extent these industries have developed. According to the United Nations Standard International Trade Classification (SITC), we classify the products of labor-intensive industries of the manufacturing sector in China into seven categories, i.e., manufacture of textile, manufacture of wearing apparel, footwear and caps, manufacture of leather, fur, and feather and its products, processing of timbers and manufacture of furniture, manufacture of papermaking, manufacture of articles for culture, educational and sports activities, manufacture of non-metallic mineral products.

**P_GDP** stands for the logarithm of real GDP per capita, deflated by the 1978 price level in order to measure economic growth and to prove whether the changes in incomes will lead to the structural changes of labor-intensive industries or not.

**TR_OPEN** measures trade openness. The total sum of import and export trade is divided by GDP to build this variable. Trade openness has produced far-reaching impacts on China’s economic growth since 1978, and a pattern of export which is dominated by labor-intensive industries has gradually come into being. But, in Chinese economic circle, there still exists a debate on whether trade openness has benefited economic growth or whether it has stimulated labor-intensive industries to expand. In our paper, the variable of trade openness is included into the simultaneous equations so as to check whether it has caused impacts on both economic growth and industrial structure.

**TEC** is an indicator for technological progress. Technological progress is usually considered to be embodied by two kinds respectively, i.e., the increase in product varieties and the improvement in product qualities. Because of the difficulties with the data availability, we define technological progress as the increase in product varieties, measured by the number of patent applications each year. The reason why we include this variable into the regression model is that technological progress is one of the main sources of economic growth, and it also causes the variation in the utilization efficiency of productive factors in different industries, leading to transformation in industrial structure.

**SEC** represents the proportion of gross output value of the secondary industry to GDP. We adopt it to measure the change of industrial structure at the level of the primary, secondary and tertiary industries. We use this variable to probe into the influence of economic growth on industrial structure and to further observe whether economic growth is biased towards the development of labor-intensive industries. Similarly as we build the variable **L_STR**, we utilize the words *proportion, share, structural change or development*
alternatively to express the positions and the level of development of the secondary industry. It is worth mentioning, that we use the share of secondary industries in gross output value as a similar proxy variable of the share of capital (technology)-intensive industries in gross output value, because the complete and detailed data on capital (technology)-intensive industries is unavailable.

**WORK** is the logarithm of total employment. We use it to calculate the effect of the variance of total number of the employed persons in labor-intensive industries. We add it into the model for two considerations. On the one hand, to add the extra variables into the equations of the share of labor-intensive industries can make the equations to be discerned. On the other hand, the increase of the employed workers in labor-intensive industries may strengthen the comparative advantage of labor factor if the newly employed workers supply their effective labor, and furthermore, it gives impetus to the expansion of labor-intensive industries.

**INV** expresses the investment rate, denoted by the share of total fixed capital investment to GDP. There are also two reasons for introducing this variable into the empirical model. One reason is that without this extra variable, the economic growth equation cannot be discerned. Another reason is based on the fact that China’s high rate of economic growth is, to a great extent, driven by high rate of fixed capital investment.

Since the data we collect from the above-mentioned seven categories of labor-intensive industries are incomplete, in order to meet the requirement of data completeness, we have to choose the time series data during the period of 1986-2010 as analysis samples. We construct the above variables based on the data which are sorted out from *China Statistical Yearbook* of each year and *The New China Statistics Fifty Years Assembly*.

**Econometric Analysis and Testing**

**The Simultaneous Equations Models**

When we build up the simultaneous equations models, we focus on the simultaneity problem. If the simultaneity problem arises, the OLS estimation will reveal inconsistency estimators. Correspondingly, we need adopt the Two-stage Least Square (TSLS) estimation and the Instrumental Variable (IV) estimation. If the simultaneity problem does not arise, we can use the OLS method to get consistent and efficient estimates. At the beginning, we apply Hausman Test to decide whether the simultaneity problem appears. According to the results, Hausman Test shows that there exists simultaneity among the empirical equations (1), (2) and (3). Therefore, we utilize the TSLS method to estimate the models.

When using the TSLS estimation, we develop our regression analysis using factors that have made influence on the share of labor-intensive industries (L_STR). Since trade
Trade Openness, Economic Growth and the Vicissitude of Labor-intensive Industries...

openness and economic growth are highly correlated, they do not enter the equation simultaneously. The regression results are presented in Table 3.

**TABLE 3. The results of L_STR (TLS)**

<table>
<thead>
<tr>
<th>variables</th>
<th>symbols</th>
<th>Model(1)</th>
<th>Model(2)</th>
<th>Model(3)</th>
<th>Model(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>C</td>
<td>0.385589***</td>
<td>0.245716***</td>
<td>−3.346345***</td>
<td>−3.451977***</td>
</tr>
<tr>
<td>Trade openness</td>
<td>TR_OPEN</td>
<td>−0.1445824***</td>
<td>−0.051633**</td>
<td>−0.024662*</td>
<td>−0.115029**</td>
</tr>
<tr>
<td>Economic growth</td>
<td>P_GDP</td>
<td>−0.060841***</td>
<td>−0.024662*</td>
<td>−0.051633**</td>
<td>−0.120398***</td>
</tr>
<tr>
<td>Technological progress</td>
<td>TEC</td>
<td>−0.115029**</td>
<td>−0.120398***</td>
<td>−0.120398***</td>
<td></td>
</tr>
<tr>
<td>The share of gross output value of secondary</td>
<td>SEC</td>
<td>−0.115029**</td>
<td>−0.120398***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>industries to GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total employment</td>
<td>WORK</td>
<td>−0.024662*</td>
<td>0.843504***</td>
<td>0.856541***</td>
<td></td>
</tr>
<tr>
<td>Investment rate</td>
<td>INV</td>
<td>−0.002984**</td>
<td>0.003246***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>0.481011</td>
<td>0.412579</td>
<td>0.904674</td>
<td>0.892090</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td>0.456297</td>
<td>0.384607</td>
<td>0.878195</td>
<td>0.869372</td>
</tr>
<tr>
<td>DW statistics</td>
<td></td>
<td>0.439838</td>
<td>0.576124</td>
<td>1.499242</td>
<td>1.371070</td>
</tr>
<tr>
<td>F statistics</td>
<td></td>
<td>20.33023</td>
<td>17.13765</td>
<td>34.1651</td>
<td>39.26828</td>
</tr>
</tbody>
</table>

Note: ***, **, * means the estimators are significant at the levels of 1%, 5%, 10%, respectively.

Source: own elaboration.

In Table 3, we show that in the Benchmark Model 1 and Benchmark Model 2, trade openness and economic growth respectively have significantly negative effects on the proportion of labor-intensive industries. On the one hand, for many years, China’s foreign trade has mainly relied on export of the low value-added labor-intensive products. This kind of trade pattern of labor-intensive industries means that when trade openness increases and export grows, the added value from export will decrease, which will be further explained below. So, the increase of trade openness is harmful to the expansion of labor-intensive industries. On the other hand, economic growth in China is seemingly detrimental to the development of labor-intensive industries, too.

Economic growth in China tends to reduce the share of labor-intensive industries in the manufacturing sector. This result can be attributed to the following factors. Firstly, GDP growth tends to raise the income level. According to the law of marginal propensity to consume, when GDP per capita goes up, the demand for consumer goods of high quality will rise while the demand for those of low quality will fall. Since in China, the goods made by labor-intensive industries are basically low-grade consumer goods, economic growth
will probably result in two opposite effects at the same time: it causes an increase in the income level while it leads to an accompanying reduction in demand for labor-intensive goods. Whether economic growth has pushed labor-intensive industries forward or not depends on which effect dominates another. Secondly, economic growth will accelerate capital accumulation, and enhance the proportions of capital as factor endowment. Consequently, economic growth shifts comparative advantage to the capital-intensive industries, and the resultant structural adjustment within the manufacturing sector causes a decline of the share of labor-intensive industries. Thirdly, economic growth usually is consistent with a high level of technological progress and diffusion, and the cost of utility of new technologies is hence reduced. Moreover, the advanced technologies are more often applied to the high value-added capital-intensive or technology-intensive industries while less frequently to the low value-added labor-intensive industries. That is an important reason why technological progress often generates advances in the high-tech industries while producing negative effects in labor-intensive industries, decreasing the share of China's labor-intensive industries in the manufacturing sector.

In the next step we add the control variables into the benchmark models and remove those insignificant variables. Our regression results (see Model 3 and Model 4) show that the coefficients of trade openness and economic growth are significant, which means the empirical models are robust, but the effects made by trade openness and economic growth respectively on the proportion of labor-intensive industries have been reduced. This means that, on the one hand, there is a certain correlation between our control variables and trade openness or between control variables and economic growth; on the other hand, the regression results of control variables demonstrate that the coefficients of technological progress in labor-intensive industries are significantly negative. It follows that in China, technological progress is generally not conducive to the development of labor-intensive industries. Similarly, the significantly positive coefficients of total employment suggest that the increase in total number of employed persons facilitates labor-intensive industries to expand.

This result has verified the inference of comparative advantage theory. It confirms that labor as a factor endowment still plays an important role in promoting economic growth in China. The coefficient of investment rate in labor-intensive industries is significantly positive which supports widely accepted views in the Chinese literature that a large amount of capital input is still one of main driving factor to promote China's economic growth.

Table 4 presents the regression results when economic growth is used as an independent variable. Here we recognize that the results are generally consistent with those in Table 3. Since trade openness and the share of labor-intensive industries are highly correlated, they need a separate regression models. The results indicate that the influences from both of them on economic growth are highly significant: trade openness makes positive effects on economic growth while the share of labor-intensive industries is detriment to economic growth (see Model 5 and Model 6).
Since China carried out the strategy of opening-up in early 1980s, foreign trade had been an important engine for economic growth. The labor-intensive industries, which depended on a large quantity of cheap rural labor, have made significant contributions to China’s economic growth. But, there exists a heated debate on the role of labor-intensive industries: some research results have testified that the unduly large share of labor-intensive industries in the manufacturing sector certainly will impede sustainable development in China. As compared to the products of capital (technology)-intensive industries, labor-intensive products are usually both cheap and low value-added. The more these industries get expanded, the less they have contributed to China’s GDP growth. Therefore, if the share of labor-intensive industries is rising, they will occupy a large amount of resources (which should have been used in the capital(technology-intensive industries) and only produce a large number of the low value-added products. If this process continues, it will hamper transformation and development in China.

<table>
<thead>
<tr>
<th>TABLE 4. The results of P_GDP (TLS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample interval: 1986-2009, 24 samples</td>
</tr>
<tr>
<td>variables</td>
</tr>
<tr>
<td>constant</td>
</tr>
<tr>
<td>Share of labor-intensive industries</td>
</tr>
<tr>
<td>Trade openness</td>
</tr>
<tr>
<td>Technological progress</td>
</tr>
<tr>
<td>The share of secondary industries in gross product</td>
</tr>
<tr>
<td>Total employment</td>
</tr>
<tr>
<td>Investment rate</td>
</tr>
<tr>
<td>$R^2$</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
</tr>
<tr>
<td>DW statistics</td>
</tr>
<tr>
<td>F statistics</td>
</tr>
</tbody>
</table>

Note: ***, **, * means the estimators are significant at the levels of 1%, 5%, 10%, respectively.
Source: own elaboration.

In Table 4, after adding the control variables and removing the insignificant variables (see Model 7 and Model 8), we discover that the negative effect of share of labor-intensive industries on economic growth still remains significant, but the effect of trade openness on economic growth is insignificant, which reveals that a considerable correlation exists between trade openness and the control variables. Among the control variables, both
technological progress and the share of secondary industries have significantly positive effects on economic growth. The significantly positive coefficients of the technological progress in Model 7 and Model 8 suggest that, technological progress fosters economic growth by enhancing the production efficiency in labor-intensive industries. Similarly, the coefficients of the share of secondary industries in Model 7 and Model 8 are significantly positive. This overall regression results imply that there is still room for China’s manufacturing sectors (which include capital and technology intensive industries) to expand.

Table 5 exhibits the regression results where trade openness is treated as an independent variable. In the Benchmark Model 9 and Benchmark Model 10 of Table 5, we find that economic growth has positive effects on trade openness while the development of labor-intensive industries has negative impact on trade openness. Intuitively, high economic growth should have a positive effect on trade openness because not only does high growth lead to the expansion of export, but also to the increase of import (such as machinery and intermediate goods). Generally speaking, an open and rapidly growing economy requires a larger degree of trade dependency.

There arises a question: Why the development of China’s labor-intensive industries has negative effects on trade openness? China’s labor-intensive industrial structure was formed in early 1980s when the developed countries and the East Asian economies transferred some capital (technology)-intensive industries into China. At that time, China had just started out export-oriented development strategy. This round of global industrial transfer was accepted by China that sought capital and technology. An outward pattern of economic development of labor-intensive industries with typical Chinese characteristics of “processing given material, assembling provided components, order against samples, and compensation trade” was taking shape. The first round of China’s industrial transformation was a correct choice for it completed a change from the planning-dominated, capital-intensive heavy industries to the market-oriented, labor-intensive light industries for exports. Since then, China’s labor-intensive export industries gradually formed their strong comparative advantages. From mid-1980s to mid-1990s, these industries fueled trade expansion, giving big impetus to GDP growth.

But, circumstances changed overtime as the drawbacks of labor-intensive industries gradually revealed. In 1980s and 1990s, when FDI and multinational corporations poured into China, bringing capital and technology to supplement China’s cheap labor, transferring mainly the low-end productive links, generating low value-added and demanding large inputs of labor. The resulting problem faced by China today is that it relies on labor-intensive export industries with low-added value. This implies that the more goods these industries produce, the less the value-added will be as compared to the costs input, and the larger scale these industries have reached, the more unfavorable to trade openness these industries will be. Because the share of labor-intensive industries is measured by their proportion in gross output value taken by these industries, it means that the more open the economy is, the less benefit China will gain.
Models 11 and 12 add control variables on the basis of benchmark models. The results of these two models demonstrate that the coefficients of the share of labor-intensive industries and economic growth remain significant, which verifies the robustness of the empirical models. Table 5 also shows that both the share of secondary industries and total employment are positively related to trade openness. The important policy implications of our findings are interpreted below.

### Table 5. The results of TR_OPEN (TLS)

<table>
<thead>
<tr>
<th>variables</th>
<th>symbol</th>
<th>Model(9)</th>
<th>Model(10)</th>
<th>Model(11)</th>
<th>Model(12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>C</td>
<td>1.085699***</td>
<td>–0.827022***</td>
<td>–5.680130***</td>
<td>–0.827022***</td>
</tr>
<tr>
<td>Share of labor-intensive industries</td>
<td>L_STR</td>
<td>–3.614298***</td>
<td>——</td>
<td>–2.322232***</td>
<td>——</td>
</tr>
<tr>
<td>Economic growth</td>
<td>P_GDP</td>
<td>——</td>
<td>0.378035***</td>
<td>——</td>
<td>0.378035***</td>
</tr>
<tr>
<td>Technological progress</td>
<td>TEC</td>
<td>——</td>
<td>——</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>The share of secondary industries in gross product</td>
<td>SEC</td>
<td>——</td>
<td>——</td>
<td>0.016714*</td>
<td>——</td>
</tr>
<tr>
<td>Total employment</td>
<td>WORK</td>
<td>——</td>
<td>——</td>
<td>1.191304**</td>
<td>——</td>
</tr>
<tr>
<td>Investment rate</td>
<td>INV</td>
<td>——</td>
<td>——</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>( R^2 )</td>
<td></td>
<td>0.422104</td>
<td>0.727129</td>
<td>0.796197</td>
<td>0.727129</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td></td>
<td>0.394585</td>
<td>0.714135</td>
<td>0.765627</td>
<td>0.714135</td>
</tr>
<tr>
<td>DW statistics</td>
<td></td>
<td>0.508916</td>
<td>0.649598</td>
<td>0.839514</td>
<td>0.649598</td>
</tr>
<tr>
<td>F statistics</td>
<td></td>
<td>13.47265</td>
<td>54.54590</td>
<td>26.04470</td>
<td>54.54590</td>
</tr>
</tbody>
</table>

Note: ***, **, * means the estimators are significant at the levels of 1%, 5%, 10%, respectively.

Source: own elaboration.

### The VAR Model

The above results in the models of simultaneous equations only depict the statistical relationships between trade openness, the share of labor-intensive industries and economic growth, but they do not reflect how these variables interact one another. In fact, the interaction between the trade openness, the share of labor-intensive industries and economic growth has somewhat embodied in the above regression equations. In order to overcome the shortcomings of a single equation and express the interactions between the three variables, we apply VAR model for an in-depth analysis. A VAR (q) is specified as follows:

\[
y_t = A_1 y_{t-1} + \ldots + A_q y_{t-q} + Bx_t + \varepsilon_t
\]  

(4)
In Equation (4), $y_t$ is an unstable I (1) series of $m$ dimensions, and $x_t$ is exogenous variables vector of $d$ dimensions, $\epsilon_t$ denotes random disturbance vector. Since VAR model requires the data series of variables to be stable, we perform ADF unit root testing. We find that all the data series of the above three variables are unstable, but the first order difference form of the data series of the variables turns out to be stable at the significance level of 5% (see Table 6). Therefore, in this paper, we adopt the first order difference form. In the meanwhile, being limited to the samples, we need to determine the proper lag order $q$. Five kinds of tests are applied in this paper, namely LR test, Final Prediction Error (FPE) test, AIC criterion, SC criterion and HQ criterion. According to the results, we select 4 as the proper lag order (see Table 7).

**TABLE 6. Data stationarity test**

<table>
<thead>
<tr>
<th>variable</th>
<th>testing model</th>
<th>statistics</th>
<th>1% critical value</th>
<th>5% critical value</th>
<th>10% critical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_GDP</td>
<td>(0,0,1)</td>
<td>1.027729</td>
<td>-3.7667</td>
<td>-3.0038</td>
<td>-2.6417</td>
</tr>
<tr>
<td>dP_GDP</td>
<td>(c,t,1)</td>
<td>-2.748144</td>
<td>-3.7856</td>
<td>-3.0114</td>
<td>-2.6457</td>
</tr>
<tr>
<td>L_STR</td>
<td>(0,0,1)</td>
<td>-1.986449</td>
<td>-4.4415</td>
<td>-3.2535</td>
<td>-3.2602</td>
</tr>
<tr>
<td>dL_STR</td>
<td>(c,t,1)</td>
<td>-4.416301</td>
<td>-4.4691</td>
<td>-3.6454</td>
<td>-3.2602</td>
</tr>
<tr>
<td>TR_OPEN</td>
<td>(0,0,1)</td>
<td>-2.118370</td>
<td>-4.4415</td>
<td>-3.6330</td>
<td>-3.2535</td>
</tr>
<tr>
<td>dTR_OPEN</td>
<td>(c,t,1)</td>
<td>-1.657507</td>
<td>-2.6819</td>
<td>-1.9583</td>
<td>-1.6242</td>
</tr>
</tbody>
</table>

Note: (c, t, k) stands for the situation where the constant, the trend term and the lag phase of variables are included in the testing models, and here the lag order is determined when AIC or SC is minimized.

**Source:** own elaboration.

**TABLE 7. The determination of lag order**

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>25.03970</td>
<td>NA</td>
<td>1.97e-05</td>
<td>-2.319969</td>
<td>-2.170847</td>
<td>-2.294731</td>
</tr>
<tr>
<td>1</td>
<td>86.73962</td>
<td>97.42092</td>
<td>7.84e-08</td>
<td>-7.867329</td>
<td>-7.270841</td>
<td>-7.766379</td>
</tr>
<tr>
<td>2</td>
<td>93.62448</td>
<td>8.696662</td>
<td>1.07e-07</td>
<td>-7.644682</td>
<td>-6.600828</td>
<td>-7.468021</td>
</tr>
<tr>
<td>3</td>
<td>115.1534</td>
<td>20.39578</td>
<td>3.65e-08</td>
<td>-8.963511</td>
<td>-7.472292</td>
<td>-8.711137</td>
</tr>
<tr>
<td>4</td>
<td>146.0250</td>
<td>19.49788*</td>
<td>6.43e-09*</td>
<td>-11.26579*</td>
<td>-9.327203*</td>
<td>-10.93770*</td>
</tr>
</tbody>
</table>

Note: * represents the corresponding lag order determined by a certain criterion.

**Source:** own elaboration.

Since the impulse response function can be used to mirror the interactions between the variables, we describe the impulse response function of lag order 4 in Figure 2.
FIGURE 2. The impulse response function of VAR (4) model of lag order 4.

From the illustrations of the impulse response function of VAR model, we derive three conclusions: (1) The response of the share of labor-intensive industrials to economic growth is gradually augmented with time, and the effect of such a response is cyclical. The response of economic growth to the share of labor-intensive industries is negative at the beginning, and it shifts to be positive after lagging for 8 periods, and it turns negative again after the 14th lag period. (2) The response of economic growth to trade openness is insignificant at the beginning, but it comes into effect with time. The response of trade openness to economic growth is negative at the start, and it becomes positive after the 8th lag period, then it comes back to be negative. (3) The response of trade openness to the share of labor-intensive industries is somewhat complicated. It is negative at first, then positive after the 6th lag period, negative again after the 12th lag period and finally back to be positive after the 18th lag period. The response of the share of labor-intensive industries to trade openness is insignificant at the start. Although it augments as time goes on, it remains trivial.

In addition, the results of variance decomposition procedure of VAR (4) provide another way to interpret how the variables and their influencing factors affect one another (see Table 8). (1) The effect of the share of labor-intensive industries on economic growth is hysteretic and it begins to have significant effect at about the 3rd lag period. Afterwards,
such an effect gradually increases and it reaches maximum at the 12th lag period, then it begins to diminish. Economic growth has a substantial influence on the share of labor-intensive industries at the very beginning, and such an effect increases with time. However, the effect of economic growth on the share of labor-intensive industries is larger than that of the latter on the former. (2) The effect of trade openness on economic growth is hysteretic. It begins to produce significant influence at the 2nd lag period, and it keeps rising until it reaches maximum at about the 16th lag period, then it decreases. At the start, economic growth has brought a great shock on trade openness, then the effect of such a shock remains rather stable. But, the effect of economic growth on trade openness is larger than that of the latter on the former. (3) The effect of trade openness on the share of labor-intensive products is lagging behind. It becomes relevant at the 2nd lag period, then it stabilizes. At the same time, the share of labor-intensive industries has an effect on trade openness from the very beginning, which remains stable through the examined period. But, the effect of the share of labor-intensive industries on trade openness is larger than that of the latter on the former.

Table 8. Variance decomposition procedure of VAR (4)

<table>
<thead>
<tr>
<th>period</th>
<th>P_GDP</th>
<th>L_STR</th>
<th>TR_OPEN</th>
<th>P_GDP</th>
<th>TR_OPEN</th>
<th>P_GDP</th>
<th>L_STR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L_STR</td>
<td>TR_OPEN</td>
<td>P_GDP</td>
<td>TR_OPEN</td>
<td>P_GDP</td>
<td>L_STR</td>
</tr>
<tr>
<td>1</td>
<td>0.000000</td>
<td>0.000000</td>
<td>12.12360</td>
<td>0.000000</td>
<td>18.12673</td>
<td>53.33620</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.736671</td>
<td>2.524000</td>
<td>15.41316</td>
<td>7.585936</td>
<td>29.58682</td>
<td>46.78464</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10.13116</td>
<td>3.476184</td>
<td>28.26006</td>
<td>9.585630</td>
<td>23.88897</td>
<td>53.75903</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>41.20793</td>
<td>15.62714</td>
<td>32.40026</td>
<td>8.637636</td>
<td>35.12524</td>
<td>47.35233</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>37.59443</td>
<td>11.90671</td>
<td>37.17694</td>
<td>12.00439</td>
<td>24.03286</td>
<td>56.73900</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>46.38240</td>
<td>13.24816</td>
<td>47.82965</td>
<td>13.39463</td>
<td>21.98225</td>
<td>59.36249</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>52.19986</td>
<td>15.06158</td>
<td>51.09006</td>
<td>14.51974</td>
<td>30.61818</td>
<td>52.56697</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>40.72647</td>
<td>14.62298</td>
<td>58.43751</td>
<td>12.55647</td>
<td>27.24355</td>
<td>53.56747</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>29.60029</td>
<td>16.06189</td>
<td>65.49722</td>
<td>9.674468</td>
<td>26.12838</td>
<td>55.31483</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>28.84583</td>
<td>15.40767</td>
<td>64.48480</td>
<td>9.918722</td>
<td>34.94684</td>
<td>49.91247</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>36.41413</td>
<td>12.83608</td>
<td>70.20958</td>
<td>12.75432</td>
<td>34.09480</td>
<td>49.04272</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>24.65543</td>
<td>11.89548</td>
<td>67.37200</td>
<td>10.85550</td>
<td>32.40707</td>
<td>52.54445</td>
<td></td>
</tr>
</tbody>
</table>

Note: The results of variance decomposition procedure are performed by EVIEWS 6.0.
Source: own elaboration.
Conclusions and Policy Implications

In this paper, we consider China’s industrial transformation and analyze empirical data for the period 1986-2008 to better account for why labor-intensive export industries had once played their roles as China’s engines of growth. We rely on empirical models to examine and test the systematic co-relationship between the development of labor-intensive industries and other variables. The goal is to account for the factors behind the vicissitude of China’s labor-intensive export industries.

In the introductory section, we discuss two strands of Chinese literature concerning the vicissitude of China’s labor-intensive industries; one upholding the theory that China should continue to develop labor-intensive industries and the other urging China to adjust its industrial structure and turn it to more capital (technology)-intensive industries. Based on our findings, we argue that the second theory is better supported. Based on our empirical results, we conclude that:

(1) In the period when the labor-intensive export industries were forming, the strong comparative advantage rooted in abundant and cheap rural labor has promoted China’s foreign trade and economic growth. But, over time, China’s labor-intensive industries which gain low value-added face limits as engines of export-led growth. By contrast to the traditional inter-industry trade pattern, the intra-industry or intra-product trade patterns created newly established global patterns of vertically specialized division of labor at different levels of value-added chains. They have caused the trade originating from low value added sectors to contribute less to growth relative to more capital-intensive, high value added sectors. The empirical results of our models reveal that further development of labor-intensive industries has negative effects on both trade openness and economic growth. Based on Figure 1, the share of low value-added labor-intensive industries in gross output value began to decline since 1995. Even if we extend the data series to the present, the declining trend for these industries remains. We argue that global recession and rising trade protectionism is likely to further reduce its share.

(2) The development of China’s labor-intensive industries has a tendency to excessively expand. For over more than 30 years, China followed an export-oriented strategy where the numerical export targets were set up and the enterprises, no matter public or private, are encouraged to actively participate in the competition for export. In the circumstance of an economic transition, in which some vestiges of the traditional planning economy remain, this process evoked by the export-led development strategy easily induces the labor-intensive industries to expand. In addition, since the major export competition instrument implemented by firms in labor-intensive industries is the low price, it encourages an easy solution – reliance on cheap labor instead of costly investment enhancing technologies and capital and improving quality of products. In consequence, the low-added value in exports of labor-intensive products makes these industries less competitive and
leads to inefficient use of resources. These two reasons demonstrate that the heyday of China's labor-intensive export industries has gone forever and China urgently needs another industrial transformation to move from labor-intensive export industries into more capital (technology)-intensive industries.

China's industrial structure has undergone a major restructuring, as capital (technology)-intensive industries have increased their share in output and exports since mid-1990s, and the total capital stock have increased supporting that process. Based on the literature, some Chinese economists argue that a few China's capital (technology)-intensive industries, such as IT industry, office work and communication equipment, machinery and transportation equipment etc., have built up their preliminary international competitiveness. The regression results in our paper show that the coefficients of the share of secondary industries are significantly positive, which at least imply that there is still a vast space for China to further develop its capital-and-technology-intensive industries.

China's goal for its second industrial upgrading, that is to scale down the labor-intensive industries, while to scale up the capital (technology)-intensive industries will likely alter the present outward pattern of economic development. Consequently the pertinent question is how to further upgrade the capital (technology)-intensive industries. Under current international division of labor, which is characterized by vertical specialization, China has two ways to enhance its capital (technology)-intensive industries: Firstly, promote capital (technology)-intensive industries with competitive advantage to escalate along the value-added chains and try to connect their production with the higher-end links relating to R&D or the global distribution network so as to complete the industrial upgrading. Secondly, cultivate the ability of self-reliance innovation of these industries, and make every effort to foster own core technology and core competitiveness. This self-reliance innovation in China is well displayed by the example of swift development of high-speed train.

Due to the characteristics which are peculiar to the capital (technology)-intensive industries, such as externalities, indivisibility of capital equipment, scale effects, asymmetrical information, technological market deviating from perfect competition, social overhead capital aroused by structural upgrading, match of human capital to accumulation of physical capital and industrial upgrading etc., Chinese government should find the right fields in which its intervention plays indispensable roles of coordinating investment activities and tackling externalities and other market failures. Of course, the necessary premise of government intervention is that in China, the further market-oriented reforms should be carried forward so as to let market play decisive role in allocation of resources. Only on this basis, can the government intervention be effective.

Although China's labor-intensive industries have their weakness of gaining too less added value, which has crippled their ability to prop up healthy and sustainable development, we must confess, from another angle, the labor-intensive industries are still making a considerable contribution to create the opportunities for employment and maintain social
stability. For such a country with so large a population as China, to heighten the rate of employment is a long-run target of a macroeconomic policy. It is worth mentioning that quite a number of labor-intensive enterprises are private-owned. During the transitional period, to maintain enough private firms will prepare a good circumstance in which the market-oriented reforms will be more effectively put into effect.

At present, the government’s policy orientation is to scale down and reshuffle the labor-intensive industries, not to shut down these industries abruptly. In the process of second industrial transformation, while the dominant position for export industries will be gradually substituted by the capital (technology)-intensive industries, there still exist great potentialities for the labor-intensive industries to develop. For those industries that still have latent international competitiveness, such as textile and apparel etc., the government should induce them to seek a strategy of “famous-brand” and turn “price advantage” into “brand advantage” and “distribution channel advantage”. At the same time, R&D should be encouraged, workers should be trained on the job and human capital should be cultivated and its stock should be motivated into use in order to ameliorate productive efficiency and to raise the value-added of labor-intensive products.

We are aware of the limitations of the current study. First of all, we have not introduced the variable of human capital into the econometric models. It is easy to adopt the data of labor-intensive industries as a whole, but it is difficult for us to find an approach to differentiate the human capital in China’s labor-intensive industries from the high-qualified human capital at some production links in capital (technology)-intensive industries. Another limitation is that we expect China’s capital (technology)-intensive industries to dominate in the economy, but in this paper we have not analyzed the relative positions of the capital (technology)-intensive industries in Chinese economy as compared to that of the labor-intensive industries. In addition, we used the share of secondary industries as a proxy variable of the share of capital (technology)-intensive industries. These two limitations of our study do point to an important research direction on our agenda in the future.

Notes

1 The authors acknowledge the financial support of the project A Study on the Transformation of China’s Outward Pattern of Economic Development (13JJD790021) given by the Ministry of Education, P.R. China.

2 A hypothesis that refers to the importance of impacts of changes of industrial structure on economic growth stresses that in the process of industrialization, due to the different levels of productivity and the
different rates of productivity growth, when the productive factors flow from the sectors with low levels of productivity or low rates of productivity growth to the sectors with high levels of productivity or high rates of productivity growth, the aggregate productivity growth will be accelerated. This explanation based on the contribution made by the changes of industrial structure which is initiated by factors flow on productivity growth is called the “Structural Bonus Hypothesis”. The “Structural burden hypothesis” expresses the reversed meaning. The feature that the change of industrial structure plays an important role on economic growth is more protruding in developing countries than in industrialized countries has been accepted as one of the “stylized facts”. See M.P. Timmer and A. Szirmai, (2000), Productivity Growth in Asian Manufacturing: The Structural Bonus Hypothesis Examined, *Structural Change and Economic Dynamics*, Vol. 11, pp. 371–392.

3 The Industrial Enterprises above the Designated Size denote all the state-owned industrial enterprises and the non-state-owned industrial enterprises in China whose yearly gross output value reaches 5 million yuan or above 5 million yuan (in 2011, the State Statistics Bureau adjusted this requirement up to 20 million yuan or above 20 million yuan).

4 Because of lacking the data of gross output value of manufacturing sector in 2004, we adopt the share of labor-intensive industries in gross sale value of manufacturing sector as a substitute.

5 Including the industries that need more intensive input of labor, such as glass and glass products, non-refractory pottery and porcelain products, refractory pottery and porcelain products (porcelain bricks), sintered clay bricks, tiles and other building products, the stones used as building and fitting-up materials, grinding materials (diamond), asbestos etc.

References


Nicet-Chenaf, D., Rougier, E. (2009), *Human Capital and Structural Change: How do they Interact with each other in Growth?* GRETHA UMR CNRS 5113, University of Bordeaux.


In this study, we examined the impact of emotional intelligence on sales performance. We posited that the impact of emotional intelligence (EI) on sales performance was mediated by adaptive selling behaviour (ASB). Data were collected from 281 sales people in the financial industries in Malaysia via the WLEIS emotional intelligence scale and ADAPTS adaptive selling behaviour scale, and were quantitatively analysed using structural equation modelling (SEM). Results were in keeping with the model. Three domains of EI were not found to impact sales performance directly but through ASB. Theoretical implications and managerial ramifications were also discussed.

Keywords: Emotional intelligence (EI), adaptive selling behaviour (ASB), sales performance.
JEL: M310, M100

Introduction

Today’s marketing environment is complex; the market is extremely competitive, technology is making alternatives and low-distribution methods possible, product lifecycles are accelerating, and customers are becoming less loyal and more sophisticated.
while at the same time becoming more demanding. As a result, the nature of buyer-seller exchanges and account management has shifted from a simplistic production-and-sales perspective to a more complex role of partnering with customers [Dwyer, Schurr, Oh, 1987; Weitz, Bradford, 1999]. Competing in this environment requires firms to possess the best possible group of salespeople. Good salespeople continue to have a value in firms in generating sales and building strong, loyal customer relationships. In fact, salespeople play a key role not only in customer relationship management but also in understanding, creating, communicating and delivering values to customers, which in turn increases the sales performance of the firm [Paparoidomis, Guenzi, 2009; Weitz, Bradford, 1999]. Therefore, it is not surprising that for decades sales management researchers have invested time in studying determinants of salesperson performance. Researchers have come to agree that role perception, aptitude, skill level and motivation level are the main determinants of salesperson performance [Churchill et al., 1985]. Although in recent years there has been considerable and growing interest in the concept of emotional intelligence [EI] in the Organizational Behaviour, Human Resources, and Management literature [O’Boyle Jr. et al., 2010], it has yet to receive sufficient attention in the sales performance literature. The research areas in the Organizational Behaviour, Human Resources and Management literature stress the importance of EI as a predictor of leadership, negotiation skills, perception of trust in leader-member relationship, organizational citizen behaviours, work-family conduct, and work performance [Ashkanasy, Daus, 2002; Carmeli, Josman, 2006; Cote, Miner, 2006; Dulewicz et al., 2005; Humphrey et al., 2008].

The theory of emotional intelligence was set forth by the Harvard psychologist; Gardner in 1983. He based his theory upon the social intelligence concept developed by Thorndike in 1920. Gardner’s concept was then expanded by Mayer and Salovey in the early 1990s; however, it did not become popular until Goleman published his book in 1995. The concept of emotional intelligence has been developed in the fields of neuro-psychology and neuro-science, and focuses on a patterned structure of responses that regulates emotions: in particular, it focuses on the role of brain connectivity between the amygdale and the neural cortex [Roche, 2004]. Despite its recent emergence in the literature, it already includes a large number of domains. Of these many domains, four main approaches to emotional intelligence have been widely used in recent years – the EQ-i Bar On; the ECi Goleman approach; the Four Branch Model of Mayer, Salovey and Caruso [MSCEIT]; and the Four Dimension EI approach of Davies, Stankov and Roberts [1998] [Law et al., 2004; Rahim, Psenicka, Zhao, Yu, Chan, Kwok Wai et al., 2002]. Although a variety of EI domains have been conceptualised over the years, the modern interest in EI began with Mayer and Salovey [1997]. They [1990] describe emotional intelligence as a form of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to use them to guide one’s thinking and action. Their concept of emotional intelligence has been built upon by Mayer et al. [1997; 2000], who suggest the four-branch model as the construct of emotional intelligence: (1) the
ability to accurately perceive, appraise and express emotion; (2) the ability to use emotion to facilitate thinking; (3) the ability to understand the temporal course and probable outcome of emotions; and (4) the ability to regulate emotions effectively. They also claim that emotional intelligence is a form of intelligence in that the development of emotional intelligence increases with age [Mayer, Salovey, 1997]. It is important to recognise, however, that the various theoretical perspectives regarding emotional intelligence are not mutually exclusive. In a meta-analytic study, Van Roy and Viswesvaran [2004, p. 72] described EI as “the set of abilities [verbal and non-verbal] that enable persons to generate, recognize, express, understand, and evaluate their own, and others', emotion in order to guide thinking and action that successfully cope with environmental demands and pressures.” In this study, we adopt the Law, Wong and Song EI measures, WLEIS [2004], which are based on Mayer and Salovey [1997] and Mayer et al. [2000] This EI theoretical model examines the four domains of EI separately.

Given that EI was initially made known through a series of articles [Gibbs, 1995] and trade books [Goleman, 1995; 1998] with little or no analytic evidence established, it is not surprising that EI has received robust criticism by few scholars and has received less attention among sales management researchers. For example, EI is often considered as an elusive and vague concept and as more of a myth than a science [Matthew et al., 2004]. These initial negative opinions on EI, according to Mayer et al. [2004], resulted from the lack of empirical research evidence. Although there is much argument surrounding the nature and validity of EI, it is also clear that the concept and domain of EI has been gradually accepted in numerous studies [Davies et al., 1998; Mayer et al., 1997; 2004; Law et al., 2004; Chrusciel, 2006]. For example, several empirical studies have found a positive association between EI and performance [e.g., Dulewicz et al., 2005; Jennings, Palmer, 2007; O’Boyle Jr. et al., 2011; Semadar et al., 2006]. O’Boyle Jr. et al. [2011], in their meta-analysis, found a relationship between EI and job performance over and above cognitive intelligence and the personality traits in all three streams studied. They concluded that ‘EI represents one important predictor of job performance’ [O’Boyle Jr. et al., 2011, p. 806]. Similarly, Van Roy and Viswevaran [2004] provide empirical support for the positive impact of EI on performance. In contrast, others found an inconsistent or non-existent relation between EI and performance on particular tasks [Austin, 2004], academic performance [Petrides et al., 2004], and supervisory ratings [Wong, Law, 2002]. Interestingly, Tae and Won-Moo [2011] found that three domains of EI – appraisal of emotions, optimism, and social skills – were negatively related to job performance.

Although the previous empirical studies have been helpful in contributing to the body of knowledge, our present study builds upon the literature in a few ways. First, there are few empirical studies in sales literature focusing on the impact of EI on sales performance. Since EI is a form of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to use them to guide one’s thinking and action [Mayer, Salovey, 1997], it would be fair to argue
these are some of the skills required for building relationships between salespeople and clients, which in turn could influence sales performance. Second, few empirical studies have examined the components of EI domains that impact performance separately. As Carmeli and Josman’s empirical study points out, “it is not clear which emotional intelligence components implicate which type of work performance . . . it is important to establish which specific components of the emotional intelligence model relate to work outcomes” [Carmeli, Josman, 2006, p. 415]. We respond to Carmeli and Josman [2006] by examining the impact of various EI domains on sales performance separately. Third, Cote and Miners [2006] conclude that the relationship of EI to performance is not always linear. In response, we argue that the effect of EI on sales performance can be extended through a mediator.

In particular, this study addresses the following two broad research questions:
• To what extent does EI influence the sales performance of a salesperson?
• Does adapted selling behaviour mediate the relationship between EI and sales performance?

Emotional Intelligence and Work Performance

Despite the debate surrounding the concept and constructs of EI, several studies have shown positive associations between EI and leadership, and to some extent individual work performance and team performance [Dulewicz et al., 2005; Longhorn, 2004; Mayer, Caruso, 2002]. A growing body of research suggests that EI provides basic competencies that are important in almost any job. In fact, EI is claimed to be a better predictor of success than the traditional measure of general intelligence, IQ [Goleman, 1998; Pellitteri, 2002]. For example, Goleman [1998] found that 67% of the abilities that are regarded as essential for effective performance were emotional competencies, and EI accounts for almost twice as much as IQ and expertise. The higher an individual rises in an organisation, the more important EI becomes, compared to IQ and technical skills [Goleman et al., 2002]. Dulewicz et al. [2005] provide some initial evidence that EI (9.2%) makes the greatest contribution to overall performance when compared to general intelligence (5.0%) and managerial competencies (6.1%). Emotional intelligence can enhance the job performance of individuals even with low cognitive skills through the quality of social relationships [Cote, Miners, 2006]. If job performance is not attained through cognitive intelligence, it can be attained through EI via multiple complementary mechanisms, such as interactions with co-workers, supervisors and support staff [Cote, Miners, 2006].

In the leadership literature, researchers found that leaders who are emotionally competent were better performers and more successful [Brown, Moshavi, 2005; Mayer, Caruso, 2002]. An emotionally competent leader correlates with an emotionally competent group
norm, which in turn affects the team performance. Dulewicz et al. [2005], in studying the leadership of navy officers across seven different ranks, found that EI accounts for the greatest contribution to overall performance. Another study that took place in a retail industry found that EI was negatively related with workplace distress and stress, and positively related with emotional well-being, morale, quality of work life, and overall performance ratings [Slaski, Cartwright, 2003]. Interestingly, although Wong and Law [2002] found that the EI of leaders was positively related to job satisfaction and extra-role behaviours of followers, no relationship was found between the EI of leaders and the job performance of their followers. Similarly, Feyerherm and Rice [2002] discovered that the higher the EI of the team leader, the worse the team's performance, concluding that highly emotional intelligent people tend to focus on their own performance and hence neglect the team. Langhorn [2004] found no support for the view that age-related EI was associated with performance. A person with high EI may employ their abilities to develop good social relationships that can boost task performance through advice and social support [Wong & Law, 2002]. For instance, the ability to be empathetic and understand both one's own emotions and the emotions of others would enable one to establish a rapport with and effectively manage subordinates [Semadar et al., 2006]. Further, the ability to manage and control emotional states such as anger and frustration can be conducive to a more stable working environment [Newsome et al., 2000]. In addition, Cote and Miners [2006] found that EI is an important predictor of job performance due to its interactive effect with cognitive intelligence. Previous research has also explicitly proposed that EI relates to task performance in independent and complementary linear ways [Mayer et al., 2000; Cote et al., 2003]. Bardzil and Slaski [2003] suggest that if a manager has interpersonal skills [one of the emotional intelligence constructs], then s/he can evaluate the emotional states of customers in order to identify their needs [Chrusciel, 2006]. This could lead to gaining competitive advantage. This suggestion is supported by Longhorn's [2004] empirical study on the restaurant industry. The study that uses Bar-On EQ-i [1997] measures found that EI is positively related to customer satisfaction, which in turn increases the performance of the firm [Longhorn, 2004]. Interestingly, the study also found that EI is able to predict team turnover.

In the sales literature, it is recognized that the sales account management job requires a sales account manager to deal with emotional skills and maintain self-control when under pressure in almost all sales tasks [Churchill et al., 1988]. Researchers have found that a salesperson's performance is related to his/her ability to manage various social problems and deal with motivational and emotional problems that arise due to negative feedback and failures [Brown et al., 1997]. A salesperson is also required to understand the feelings of others and the reasons behind them in order to persuade them into entering the sales-purchase contract. A salesperson of high emotional intelligence will be resilient and able to maintain self-control and deal with difficult situation [Sjoberb, Littorin, 2003]. Summarising the discussion above, we hypothesise the following:
Emotional Intelligence – Sales Performance Relationship: A Mediating Role of Adaptive Selling behaviour (ASB)

The concept of adaptive selling behaviour has been examined and developed over the last few decades [Park, Holloway, 2003; Spiro, Weitz, 1990; Weitz et al., 1986]. Generally, adaptive selling behaviour refers to alterations in the selling strategies, tactics, social style, verbal communication and physical appearance of the seller [Giacobbe et al., 2006]. Nonetheless, over the years, the definition of adaptive selling behaviour has evolved to reflect the philosophy of selling and marketing in that era. In the late 70s to early 80s, when ‘hard sell tactics’ were popular, adaptive selling behaviour was defined as “required persuasive techniques and the selection and use of appropriate methods” [Weitz, 1981, p. 502]. In comparison, in the late 80s, adaptive selling behaviour was defined as “the altering of sales behaviour during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation” [Weitz et al., 1986, p. 175]. In today’s relationship marketing era, buyers are more experienced, educated and powerful; consequently, the definition of adaptive selling behaviour has changed to reflect this condition: “a complex process that emphasizes customised solutions to fit each buyer” [DelVecchio, Zemanek, McIntyre, Claxton, 2004, p. 859].

Emotional Intelligence and Adaptive Selling Behaviour

Since EI is a form of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, a salesperson high in EI is expected to be able to adapt his/her selling behaviour to customise solutions to each potential buyer’s needs. As a salesperson engages in active listening and becomes sensitive to the feelings and emotions of others, that salesperson develops a greater ability to understand the unique set of needs and problems of the customer, which could lead to adaptive selling behaviour [Pelham, 2008]. As Giacobbe et al. [2006] developed a model of the relationship between adaptive selling behaviour and sales performance, they argue that empathic ability towards customers and the ability to pick up contextual cues and modify one’s own behaviour are some of the domains that moderate the relationship between ASB and sales performance. Arguably, these are the domains of emotional intelligence [Mayer, Salovey, 1997; Wong,
Law, 2002]. Based on this argument, it is fair to predict that ASB mediates the relationship between EI and sales performance. Hence, we posit the following:

\[ H_{2a}: EI -1: \text{The effect of self-emotion appraisal on sales performance is mediated by adaptive selling behaviour.} \]

\[ H_{2b}: EI-2: \text{The effect of others-emotion appraisal on sales performance is mediated by adaptive selling behaviour.} \]

\[ H_{2c}: EI-3: \text{The effect of use of emotion appraisal on sales performance is mediated by adaptive selling behaviour.} \]

\[ H_{2d}: EI-4: \text{The effect of use of regulation of emotion on sales performance is mediated by adaptive selling behaviour.} \]

**Adaptive Selling Behaviour and Sales Performance**

The relationship between ASB and sales performance outcomes is well acknowledged in the sales literature [Anglin et al., 1990; Giacobbe et al., 2006; Sujan et al., 1994]. For example, several studies have found that adaptive selling behaviour exerts a positive influence on a salesperson’s regular performance, closing ratios, and the effectiveness of a sales department and unit [Johlke, 2006]. However, the practice of adaptive selling arguably would be successful provided that the salespeople are predisposed to its facets, such as the recognition of different selling approaches and the ability to use them, and the collection of information about the sales situations to facilitate this adaptation [Spiro, Weitz, 1990]. Information about the market plays important roles in the success of adaptive selling practices, which in turn influences the sales performance [Spiro, Weitz, 1990]. Based on this finding and argument, it is fair to predict that ASB impacts sales performance. Therefore, we posit the following:

\[ H_3: \text{Adaptive selling behaviour is positively related to sales performance.} \]
FIGURE 1. Research Model

Source: own elaboration.

METHODOLOGY

Data Collection

Data were collected from account managers in the financial industry in Malaysia. The survey was distributed to 1441 account managers in December 2011, drawn randomly from the 29 finance companies including stock broking houses in Malaysia that were registered with Central Bank (Bank Negara). Subsequently 281 usable replies were received, yielding a 19.5% response rate. Twenty randomly selected non-responding managers were contacted by telephone to directly ascertain reasons for non-response. This revealed that the main reasons were (1) ineligibility, such as no longer having direct contact or making sales presentations to customers, or (2) time constraints which prevented participation in the survey.

Measures

To measure EI, we used the self-rating emotional intelligence scale WLEIS [Law, Wong, Song, 2004]. WLEIS was developed based on the EI theoretical concepts of Mayer and Salovey [1997]. This measure has been validated and replicated by many scholars. To conclude the validity of WLEIS, O’Boyle Jr. et al. stressed that “specifically, more
research needs to be conducted to assess the validity-based measures of EI (e.g., MSCEIT V2.0) as compared to self-report measures WLEIS...” [2011, p. 789]. The response format of this measure is a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree). The 16 items of the WLEIS measure four EI-related sub-constructs: self-emotions appraisal, others-emotions appraisal, use of emotion, and regulation of emotion – each of which has four items. Sample items include the following: “I have a good sense of why I have certain feelings most of the time” (Self-Emotion Appraisal); “I always know my friends’ emotions from their behaviour” (Others-Emotions Appraisal); “I am a self-motivating person” (Use of Emotion); and “I am quite capable of controlling my own emotions” (Regulation of Emotion). Table 1 presents the scale reliabilities for the EI constructs.

<table>
<thead>
<tr>
<th>Emotional Intelligence</th>
<th>Cronbach Alpha (α)</th>
<th>Sample</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI 1 – Self-Emotions</td>
<td>.89</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EI 2 – Others Emotion</td>
<td>.91</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EI 3 – Use of Emotion</td>
<td>.89</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EI 4 – Regulation of Emotion</td>
<td>.87</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** own elaboration.

We also used Exploratory Factor Analysis testing to examine whether the four EI dimensions would emerge as separate factors. Because we are more interested in understanding the correlations among constructs and have expected these constructs to be somewhat correlated to each other, the Principal Factor Analysis method with Varimax rotation was selected as the rotation method [Leech et al., 2014]. We ran a single factor analysis on all sixteen [16] EI indicators and managed to extract 4 factors. The sample accounts for 69.64% of the variance in total, indicating strong support for the separation of EI items into four distinct variables: EI self-emotions, EI others-emotions, EI use of emotion, and EI regulation of emotion. Table 2 details out the results.
TABLE 2. Exploratory Factor of Emotional Intelligence

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>I always tell myself I am a competent person.</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td>.78</td>
</tr>
<tr>
<td>I am a self-motivated person.</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>I always set goals for myself and try my best to achieve them.</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td>.78</td>
</tr>
<tr>
<td>I would always encourage myself to try my best.</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td>.55</td>
</tr>
<tr>
<td>I can always calm down quickly when I am angry.</td>
<td></td>
<td>.80</td>
<td></td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td>I am able to control my temper so that I can handle difficulties rationally.</td>
<td></td>
<td></td>
<td>.78</td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>I am quite capable at controlling my own emotions.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td>.63</td>
</tr>
<tr>
<td>I have a good control of my own emotions.</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>I am a good observer of others’ emotions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>I always know my friends’ emotions from their behaviour.</td>
<td></td>
<td>.81</td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>I have a good understanding of the emotions of people around me.</td>
<td></td>
<td></td>
<td>.69</td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>I am sensitive to the feelings and emotions of people around me.</td>
<td></td>
<td></td>
<td>.69</td>
<td></td>
<td>.59</td>
</tr>
<tr>
<td>I really understand what I feel.</td>
<td></td>
<td></td>
<td></td>
<td>.73</td>
<td>.65</td>
</tr>
<tr>
<td>I have a good understanding of my own emotions.</td>
<td></td>
<td></td>
<td></td>
<td>.69</td>
<td>.77</td>
</tr>
<tr>
<td>I have a good sense of why I have certain feelings most of the time.</td>
<td></td>
<td></td>
<td></td>
<td>.67</td>
<td>.74</td>
</tr>
<tr>
<td>I always know whether I am happy or not.</td>
<td></td>
<td></td>
<td></td>
<td>.45</td>
<td>.55</td>
</tr>
<tr>
<td>% of variance</td>
<td>23.75</td>
<td>16.62</td>
<td>15.09</td>
<td>14.20</td>
<td></td>
</tr>
</tbody>
</table>

Determinant = .003, Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .793, Sigma = .000
Source: own elaboration.

Adaptive selling behaviour was measured via seven items from the adaptive selling scale (ADAPTS), first developed by Spiro and Weitz [1990]. The items for ASB include “I treat all customers pretty much the same”. This was measured on a 5-point Likert scale with the endpoint anchors being ‘Strongly Disagree’ and ‘Strongly Agree’. The measure also proved to be adequately reliable by its coefficient alpha of .80. Table 3 presents factor loadings for ASB items for the sample. The results are all substantial and statistically significant. The scale reliability for ADAPTS has a coefficient alpha of .92.
### TABLE 3. **Standardised Factor Loadings for Latent Adaptive Selling Behaviour**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASB7 – I change my approach from one customer to another.</td>
<td>.77</td>
<td>.73</td>
</tr>
<tr>
<td>ASB5 – I treat all customers pretty much the same.</td>
<td>−.74</td>
<td>.70</td>
</tr>
<tr>
<td>ASB6 – I like to experiment with different sales approaches.</td>
<td>.70</td>
<td>.792</td>
</tr>
<tr>
<td>ASB1 – I am flexible in the selling approach I use.</td>
<td>.67</td>
<td>.65</td>
</tr>
<tr>
<td>ASB4 – I do not use a set sales approach.</td>
<td>.62</td>
<td>.74</td>
</tr>
<tr>
<td>ASB2 – I can easily use a wide variety of selling approaches.</td>
<td>.61</td>
<td>.65</td>
</tr>
<tr>
<td>ASB3 – I vary my sales style from situation to situation.</td>
<td>.61</td>
<td>.68</td>
</tr>
<tr>
<td>Determinant</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
<td>.771</td>
<td></td>
</tr>
<tr>
<td>Sigma</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

*Source: own elaboration.*

We adopted both subjective and objective performance measures. The objective performance measure is defined as the percentage of accounts held over the annual target for the previous three years. The item for objective performance was “What were your actual sales compared to target sales during each of the last three years expressed as a percentage? For example 10% above write as 110%; 20% below write as 80%”. Subjective performance was measured by a self-assessed general performance measure developed by Farh et al. [1991]. Four items were included, such as “I make sales with the highest profit margin”. The reliability of the scale has a coefficient alpha of .91.

### Results

The first step in using SEM to test the model is to build the baseline measurement model. When the measurement model was not appropriately fit, we revised the result by assessing the parameter estimates and the modification indices [M.I] or standard residual. As suggested by Byrne [2013], we then eliminated and/or re-estimated the errors and/or parameters accordingly. The baseline model consists of the following variables: the independent variables [emotional intelligence, self-emotion, others-emotion, use of emotion and regulation of emotion]; the mediating variable [adaptive selling behaviour]; and dependent variables of sales performance.

We first examined the measurement model by conducting CFA on 7 latent variables and 28 indicators [comprised of 16 indicators for emotional intelligence, 7 indicators for ASB, 4 indicators for subjective sales performance, and one for objective sales performance]. The Goodness Fit of Index indicated that the initial model did not fit the data
well. We found the primary reason for the first run not fitting was that the model solution was not admissible. Specifically we spotted a high cross loading of objectives sales performance on composite 2 [M.I. 75.150; Par Change .821], 3 [M.I. 77.459; Par Change .911] and 4 [M.I. 69.972; Par Change .582] of subjective performance, pointing towards a redundancy in the measures. Additionally the bivariate correlation between subjective and objective performance was high [r = .713] indicating possibility of multicollinearity. This redundancy however has been noted in previous studies [Viswesvaran et al., 1996]. Following the suggestion of Kline [2010] and Byrne [2013], in dealing with multicollinearity, we combined the two constructs into one; that is we dropped objective sales performance latent from the model but its observed indicator was parcelled into one and loaded onto subjective sales performance.

We then retested the model and repeated the process until we found the model that fitted to the Goodness Fit Index. In the process, we re-estimated the following errors as the modification index for these errors were found high; re-estimated error EI8 (“I have a good understanding of the emotions of people around me”) and error EI6 (“I am a good observer of others emotion”), re-estimated error EI12 (“I would always encourage myself to try my best”) and error EI19 (“I always set goals for myself and try my best to achieve them”), and re-estimated error EI16 (“I have a good control of my own emotions”) and error EI14 (“I am quite capable of controlling my own emotions”).

A summary of the baseline measurement model is depicted in Table 4. Figure 2 shows the final Measurement Model.

**TABLE 4. Summary of CFA and Revisions Result for the Baseline Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>Changes</th>
<th>Goodness of Fit Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Run 7 latent with 28 indicators</td>
<td>$\chi^2 = 3298.45; df = 1056; \chi^2/df = 3.124; GFI = .826; CFI = .901; RMSEA = 0.078; p-Value = .000</td>
</tr>
<tr>
<td>2</td>
<td>Combined subjective and objective performance, run 6 latent with 28 indicators</td>
<td>$\chi^2 = 2831.45; df = 942; \chi^2/df = 3.124; GFI = .855; CFI = .911; RMSEA = 0.071; p-Value = .000</td>
</tr>
<tr>
<td>3</td>
<td>Re-estimated error 8<em>6 and error 12</em>9, run 6 latent with 26 indicators</td>
<td>$\chi^2 = 2432.46; df = 816; \chi^2/df = 2.980; GFI = .869; CFI = .912; RMSEA = 0.068; p-Value = .000</td>
</tr>
<tr>
<td>4</td>
<td>Re-estimated error 16*14, run 6 latent with 25 indicators</td>
<td>$\chi^2 = 2057.49; df = 746; \chi^2/df = 2.671; GFI = .915; CFI = .935; RMSEA = 0.055; p-Value = .000</td>
</tr>
</tbody>
</table>

*Source:* own elaboration.
### TABLE 5. Factor Correlation Matrix and Validity Table

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
<th>MSV</th>
<th>EI 1</th>
<th>EI 2</th>
<th>EI 3</th>
<th>EI 4</th>
<th>ASB</th>
<th>SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI 1</td>
<td>0.713</td>
<td>0.453</td>
<td>0.870</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI 2</td>
<td>0.623</td>
<td>0.397</td>
<td>0.454</td>
<td>0.894</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI 3</td>
<td>0.724</td>
<td>0.466</td>
<td>0.511</td>
<td>0.498</td>
<td>0.814</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI 4</td>
<td>0.520</td>
<td>0.211</td>
<td>0.482</td>
<td>0.477</td>
<td>0.521</td>
<td>0.748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASB</td>
<td>0.611</td>
<td>0.292</td>
<td>0.314</td>
<td>0.242</td>
<td>0.258</td>
<td>0.277</td>
<td>0.718</td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>0.694</td>
<td>0.411</td>
<td>0.174</td>
<td>0.324</td>
<td>0.119</td>
<td>0.211</td>
<td>0.435</td>
<td>0.931</td>
</tr>
</tbody>
</table>

AVE – Average Variance Extracted, MSV – Maximum Shared Variance

Source: own elaboration.

### FIGURE 2. Final Baseline Model

Source: own elaboration.
Following the establishment of our baseline model, we then tested our hypotheses. Table 6 presents the regression results.

**TABLE 6. Regression Weights**

<table>
<thead>
<tr>
<th>Path</th>
<th>Std $[\beta]$</th>
<th>UnStd $[\beta]$</th>
<th>S.E.</th>
<th>C.R. [t-value]</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI 1: Self-emotion $\rightarrow$ Sales Performance</td>
<td>.095</td>
<td>.103*</td>
<td>.109</td>
<td>.934</td>
</tr>
<tr>
<td>EI 2: Others-emotion $\rightarrow$ Sales Performance</td>
<td>.133*</td>
<td>.153*</td>
<td>.079</td>
<td>.957</td>
</tr>
<tr>
<td>EI 3: Use of emotion $\rightarrow$ Sales Performance</td>
<td>.088</td>
<td>.083</td>
<td>.109</td>
<td>.934</td>
</tr>
<tr>
<td>EI 4: Regulation of emotion $\rightarrow$ Sales Performance</td>
<td>.093</td>
<td>.091</td>
<td>.088</td>
<td>1.117</td>
</tr>
<tr>
<td>EI 1: Self-emotion $\rightarrow$ ASB</td>
<td>.222**</td>
<td>.321**</td>
<td>.109</td>
<td>.934</td>
</tr>
<tr>
<td>EI 2: Others-emotion $\rightarrow$ ASB</td>
<td>.298**</td>
<td>.283**</td>
<td>.079</td>
<td>1.251</td>
</tr>
<tr>
<td>EI 3: Use of emotion $\rightarrow$ ASB</td>
<td>.233**</td>
<td>.262**</td>
<td>.109</td>
<td>1.134</td>
</tr>
<tr>
<td>EI 4: Regulation of emotion $\rightarrow$ ASB</td>
<td>.219**</td>
<td>.206*</td>
<td>.068</td>
<td>1.117</td>
</tr>
<tr>
<td>Adaptive Selling Behaviour $\rightarrow$ Performance</td>
<td>.283**</td>
<td>.229**</td>
<td>.059</td>
<td>1.978</td>
</tr>
</tbody>
</table>

$p \leq .05, **p \leq .01$ Std – Standardized coefficient; UnStd – Unstandardized coefficient
S.E. – Standard Error; C.R. – Critical Ratio
Source: own elaboration.
FIGURE 3. Regression Result

![Regression Diagram]

Source: own elaboration.

Discussion

The emotional intelligence–sales performance relationship is relatively easy to interpret. Consistent with Hypothesis $H_{1b}$, the second domain of EI [i.e., others-emotions] has a positive impact on sales performance. This finding aligns with several meta-analyses such as O’Boyle et al. [2011], Joseph and Newman [2010] and Van Rooy and Viswesaran [2004]. Emotionally intelligent individuals who are able to recognize others’ emotions are adaptable and flexible in handling change [Chrusciel, 2006; Goleman, 1998; Wang, Law, 2002]. They have the ability to monitor others’ feelings and emotions, discriminate among them, and use this evaluation to guide their thinking and actions [Salovey, Mayer, 1997]. The ability to recognize these emotions contributes to effective social interaction, an aptitude that a successful salesperson arguably needs [Churchill et al., 1985]. Given the concept of EI 2, in the case of emotionally intelligent salespeople, they have the ability to monitor others’ feelings and needs and act accordingly to meet those needs. Arguably, these are also some of the skills required to practise ASB [Borg, Johnston, 2013; Spiro, Weitz, 1990]. This phenomenon clarifies the rationale behind the current study’s findings.

Our hypotheses concerning other domains of EI [i.e., $H_{1a}$, $H_{1c}$ and $H_{1d}$] were not supported. One possible explanation concerns how EI may predict job performance differently [Hough, 2003] and not always be in a linear relationship of cause and effect [Cote, Miners, 2006]. Although when considered directly, three domains of EI are not related
to sales performance, the results of the current study show that these three domains link to sales performance through ASB, demonstrating partial mediation in the absence of direct effect. This indicates the importance of a synergistic combination of emotional intelligence and adaptive skills, which in turn links emotional intelligence to sales performance indirectly. The findings of our study add value to the emotional intelligence–sales performance literature by providing insights on how the relationship actually occurs. Our findings concur with Cote and Miners [2006], who implied that the impact of EI on job performance is not always a linear effect.

Three interesting implications were made by the study in relation to ASB. First, the findings of the current study support the contingency theory of ASB proposed by Weitz et al. [1986], which claimed that ASB is an important determinant of a sales performance among salespeople. The results of the current study have shown that ASB explains about 3% of the variations in sales performance. This is conspicuous compared to the meta-analysis conducted by Churchill et al. [1985] which found that the average of variation in sales performance associated with ASB is less than 4%. These results serve not only to add clarity to a number of previously unclear and contentious relationships but also to extend the understanding of the overall ASB process.

Second, the findings have also shown that ASB serves as a mediator between EI and sales performance. These findings are noteworthy and support the notion of few scholars who argued that a salesperson's traits such as empathy, self-motivation and locus of control are related to the practice of adaptive selling [Borg, Johnston, 2013; Spiro, Weitz, 1990]. This study employs the WLEIS scale to measure EI. Among other things, the scale assesses the level of self-motivation, understanding of the emotion of others, and the ability to control one's temper and emotions, indicating that if a person scores high in EI, s/he will tend to be self-motivated, have a good understanding of the emotions of others, including customers, and be able to control his/her own emotions.

Third, it is also worth noting that the results of the current study support the claim that adaptation during the sales presentation is an activity engaged in by most salespeople in a context where the buying units and offerings are complex and each customer affords a significant medium- to long-term profit potential [Giacobbe et al., 2006; Kidwell et al., 2007]. The mean rating for ASB in the present study is relatively high (3.53), indicating that the respondents are highly adaptive with regard to the sales presentation. The industry studied here is comprised of financial firms that deal with complex investment products such as shares, debentures, unit trusts and bonds that arguably provide significant medium- to long-term profit potential.

On the methodological front, although it is not central to the research questions addressed in this study, it is worth noting that we found the correlation between objective and subjective performance was relatively high (r=.713) indicating possible multicollinearity [Byrne, 2013]. Indeed this was the case when we ran the Confirmatory Factor Analyses (CFA). The comparison of our results with those of Pransky et al. [2006] is interesting
and important. Pransky et al. [2006] suggest the objective and subjective performance are distinct from one another; and that both tend to emphasise different aspect of performance. However the findings of our current study lean toward the argument that objective performance and subjective performance measure similar criteria, indicating they appear to be one dimension [Viswesvaran et al., 1996].

Managerial Implications

In today’s highly competitive marketplace, personal selling plays a critical role in ensuring the firm’s ability to understand customers’ needs, which in turn increases the volume of profitable sales [Giacobe et al., 2006]. Several studies have found that salespeople play a key role in customer relationship management in terms of understanding, communicating, and delivering value to customers; thus, today’s relationship marketing focuses on interpersonal communication building and maintenance of relationships with the customers as opposed to short-term sales [Gummerson, 2008; Paparoidamis, Guenzi, 2009; Weitz, Bradford, 1999]. In today’s complex market, salespeople not only need to have good interpersonal communication skills to communicate with both internal and external customers, but also must be able to adapt, empathize and recognize others’ emotions. This study’s findings show that emotionally intelligent individuals are adaptable and flexible in handling change and have the ability to monitor others’ feelings and emotions, discriminate among them, and use this evaluation to guide their thinking and behaviour. Arguably, these are some of the elements needed to effectively develop good interpersonal communication skills with both internal and external customers. When salespeople and customers are mutually committed to the relationship, they are motivated to maintain the relationship’s existence in the long run and strive for mutual benefit [Paparoidamis, Guenzi, 2009; Weitz, Bradford, 1999].

Additionally, we found a positive relationship between emotional intelligence and adaptive selling behaviour; this has several managerial implications. First, when recruiting account managers, firms need to focus on potential candidates who (a) can facilitate social interactions with target customers, (b) have a high level of emotional intelligence, and (c) have the ability and skills to practise adaptive selling. Firms should also provide training and motivation in order to impose and instill this aptitude in salespeople. This has become especially important as traditional communication activities, such as TV and radio advertising, have become very costly and competitive.

Several studies have established that the relational behaviour of salespeople, such as adaptive selling, are the antecedents of relationship marketing, which in turn affects the effectiveness of sales performance [Jones et al., 2003; Paparoidamis, Guenzi, 2009]. In this study, we found that the aptitude of sales people, such as their ability to adapt their selling
technique, influences their sales performance. Consequently, firms need to recruit potential salespeople who have the ability to recognize others’ emotion and to adapt when meeting the needs of relationship marketing. Nonetheless, this is an area that future study could develop further. It is hoped that this study will act as a catalyst to help further research address this gap.

Limitation and Future Research

It is acknowledged that this study used only self-reports for both EI and ASB. Self-reports can be subjected to various distortions, including elements of bias and/or the faking of answers; however, previous studies have found that, when both peer and supervisor ratings were gathered, results between the self and peer/supervisor ratings were similar [Law et al., 2004; Goldenberg et al., 2006]. Moreover, supervisor ratings pose a validity risk as indicators of true emotional intelligence. For example, some supervisors are indiscriminately hard or easy across all participants or allow their personal opinions or grievances to enter into their ratings [Strauss et al., 2001].

This research also provides opportunity for possible future studies. Further replication is needed to determine how the findings reported herein align with the results of studies conducted in other work environments. In particular, the impact of EI on sales performance requires further study to understand the effect of EI constructs separately on sales performance. Further research may also explore the potential of moderators (if any) on the relationship between EI and sales performance.

References


Byrne, B. (2013), *Structural equation modeling with AMOS: Basic concepts, applications, and programming*, Routledge.


CSR and Financial Performance: The Case of Polish Small and Medium Manufacturers

Abstract

The paper explores the hypothesized link between involvement in social responsibility and financial performance. In particular, it looks at this relationship among Polish small and medium manufacturing companies that operate in food, beverage and cosmetics industries. The statistical analysis involves developing and testing structural model on the basis of data from a survey of 187 managers supplemented by validated financial metrics from an external database. The outcomes suggest the existence of a weak but statistically significant positive correlation between the CSR involvement construct and sales profit margin ($\beta=0.2$). However, CSR seems to have no discernible direct effect on ROA. The study, as the first project of this kind in Poland, adds to the sparse body of literature on financial outcomes of CSR in small and medium enterprises from emerging economies. Another distinguishing feature of this research is its methodological approach which compares favorably to many previous studies in terms of robustness.

Keywords: CSR, social responsibility, financial performance, SMEs, manufacturing, Poland
JEL: M10, M14

Introduction

The study investigates the interplay between corporate social responsibility and the resulting changes in financial performance of companies. For more than the last decade
this topic has enjoyed a lot of attention from theorists and practitioners alike, which is evident in a large number of relevant publications in academic and trade press. However, despite many research studies focused on this issue, there is a general consensus that the link between involvement in social responsibility and financial outcomes is still not well understood and surrounded with contradictory evidence. One area that is particularly under-researched is investigation of the said relationship among SMEs in emerging economies. This study attempts to address this gap.

The paper is structured as follows. First, it introduces essential concepts related to CSR and summarizes pertinent literature on associations between social responsibility and financial performance. Next, conceptualizations and scales for measuring involvement in CSR and its financial outcomes are outlined. The introductory part ends with presentation of hypotheses and a conceptual model. Discussion of sampling method comes next, with presentation of statistical outcomes to follow. The article concludes with two sections that explore implications for theory and practice and describe limitations and suggestions for further research.

Corporate Social Responsibility: Concepts and Definitions

Corporate Social Responsibility (CSR) is a notion that companies are supposed to assume and fulfill social responsibilities in addition to generating profits. As such, it is quite contrary to the traditional understanding of the role of the firm, which holds that the sole focus of the manager should be on maximizing incomes for shareholders and any activity that would involve spending company's resources in a way that does not result in increased profits is equivalent to theft [Friedman, 1962]. CSR found its ideological roots in stakeholder theory proposed by Freeman [1984]. This theory posits that the company is responsible for meeting the interests of its different groups of stakeholders, within and outside the firm, characterized by often conflicting goals and various influences on the success of its business operations. Consequently, for the best long-term effects, companies should appease their stakeholders by assuming certain social responsibilities while pursuing their business goals. More recently, building on stakeholder theory, Porter and Kramer [2006] proposed that social duties should be shifted from the periphery to the core of a business to form shared value, that is 'creating economic value in a way that also creates value for society' [Porter and Kramer, 2006].

Finding support from many academics and practitioners, CSR has been one of the popular concepts in management science for more than last two decades with considerable influences on theory and practice of marketing, strategy, operations and even human resources. In spite of a wide use of the term in both academic and trade press its understanding is sometimes vague and tends to vary from publication to publication.
As an example, Dahlsrud [2008] in his review of CSR papers managed to find no less than 37 different definitions. The lack of universally accepted definition could probably be attributed to the fact that social responsibility often functions as a buzz word, with little rigor and typically wide, blanket-like meaning that overlaps with many other concepts in business-society relations [Matten, Moon, 2008].

This paper looks at CSR as a set of management strategies with possible consequences for competitive advantage and so the definition that seems particularly relevant is the one advocated by the European Commission and based on the original work by Carroll [1979]. Accordingly, CSR is understood as “the responsibility of enterprises for their impact on society” [European Commission, 2011, p. 6] and involves business strategies that support the three principles of sustainable development – economic growth and prosperity, social cohesion and equity, and environmental integrity and protection – at a level beyond that required by governmental regulations [European Commission, 2003, p. 5]. It is worth noting that this understanding of CSR only concerns volitional and elective solutions and explicitly excludes those practices that were implemented only to meet regulatory obligations, like in natural environment protection or anti-discriminatory policies. In fact, there is a clear distinction in literature between mandatory and voluntary social responsibility, with the former termed ‘reactive CSR’ and the latter known as ‘proactive CSR’ [Groza et al., 2011]. Obviously, the more interesting from a business strategy point of view is the approach where a firm adopts socially beneficial strategies that go beyond what is required by law, as it implies that the managers may make such decisions in hopes of creating competitive advantage. Some of the economic and competitive benefits that engaging in proactive CSR could possibly bring include: more appealing brand image, enhanced consumer loyalty, higher efficiency of production processes in terms of energy and materials usage, better relations with supply chain partners, improved reputation with shareholders, more innovative and productive organizational culture and lower employee turnover [Carmeli et al., 2007; Brammer, Pavalin, 2006].

Judging from the sheer number of publications, CSR – both reactive and proactive – appears to be much better investigated in large companies than in SMEs. To some extent it can be explained by the easier access to data on CSR initiatives among large firms that tend to publish detailed reports on their socially responsible initiatives and often use it as a vital part of their PR strategies. Also, it can be argued that CSR involvement is much stronger in big enterprises due to more intense pressures from stakeholders for ethical behavior and more abundant resources which are required to support many socially responsible policies. On the other hand, SMEs through their narrower scope of operations are less visible to the public and often operate in conditions of resource scarcity and fierce competition that make their managers focus on those strategies that foster short term increases in revenues and profits and promote survival. As such, it is probably more likely among SMEs to find examples of reactive CSR, which only ensures their compliance with regulations, then voluntary, proactive initiatives that can bring about market benefits, but
can also be resource intensive [Gardenne et al., 2008]. The scarcity of reliable evidence on how SMEs use and benefit from proactive CSR is a vital reason for undertaking this study, which will hopefully contribute to bridging the gap in theoretical knowledge and provide practical recommendations and guidelines for managers of small and medium firms regarding CSR policies.

**CSR and Financial Performance: Overview of Extant Empirical Evidence**

Even after decades of research existing literature on CSR do not provide unequivocal and conclusive evidence on how the corporate financial performance (CFP) can be affected by implementing responsible business practices [Tang et al., 2012]. In fact, the scale of interest and confusion regarding the topic is aptly illustrated by Lu et al. [2014] who meta-analyzed 84 papers published between 2002-2011 that explored this relationship and found a wide – often inconsistent – array of conceptualizations, methodological approaches and outcomes. In line with earlier comments, this topic is particularly poorly investigated for small and medium businesses.

From a theoretical standpoint there are plausible arguments for a positive link between CSR and CFP. For one, stakeholder theory implies that firms that effectively cater to the needs of various groups of stakeholders can benefit from improved relationships with customers, employees, shareholders and business partners [McWilliams et al., 2006]. Specific efficiencies to be gained are more precisely indicated by transaction cost economics, which provides a basis to argue that when a firm fails to act responsibly towards some groups of stakeholders, they can question the firm’s integrity and shift their low-cost implicit contracts into more costly explicit claims. As such, companies with a high CSR reputation will also have low-cost implicit claims while those with a poor social responsibility image will face more expansive explicit claims [Peloza, 2006]. Specific examples of such troublesome explicit claims can include law suits and fines from the government, demands of shorter payment periods from suppliers and higher costs of obtaining capital owing to increased risk perception by banks and investors. Another major theoretical perspective – the resource-based view – treats CSR as an intangible strategic resource, which can be valuable, rare and non-substitutable and so instrumental in building and maintaining sustainable competitive advantage [Luo, Bhattacharaya, 2006]. Intangible assets of this kind encompass brand names, company reputation and better skills of employees and managers.

On the other hand, there is a contrasting, though currently less popular view on the interplay between CSR and CFP which holds that with socially responsible efforts often being expensive firms face a trade-off between social and financial performance. That
is, to implement CSR policies firms frequently incur costs that put them at an economic disadvantage compared to other, less socially involved companies [Auppele et al., 1985]. There is an underlying assumption that should those funds be invested otherwise the financial outcomes would be better.

From an empirical point of view, different pieces of published research often offer widely different conclusions – ranging from suggestions of negative, to neutral, to evidently positive relationships. One example of a study, which revealed that CSR can actually dampen profitability, is the work by Wagner et al. [2002] who studied the European paper manufacturing industry and found that increased environmental investments were correlated with lowered financial performance. However, the companies that were investigated were forced to make those investments by more stringent legal regulations, so the CSR there was clearly reactive and thus could entail different causal mechanisms and effects.

A number of studies reported only negligible or no positive financial effects of CSR. This outcome was more often characteristic of longitudinal studies rather than cross-sectional ones. For instance, Nelling and Webb [2009] analyzed data from 600 U.S. firms over a period from 1993 to 2000 and found that even though a cross-sectional regression yielded a proof of association between CSR and CFP, a longitudinal approach employing time-series analysis hinted at much weaker, almost nonexistent, correlations. In addition, the authors concluded that the only trace of causal relationship was between stock market performance of the companies and expenditures on the employee related CSR – apparently companies which succeeded on the stock exchange were more apt to increase their CSR spending, but only regarding their employees. One methodological problem with this study was that the measures of CSR commitment were ratings by a third-party consultancy, which arguably were less accurate than alternatively used manager self-reports.

Another evidence for the lack of link between CSR and CFP comes from the work by Bello [2005], who analyzed investment funds in USA in the late 1990s. He compared funds with only socially responsible firms in their portfolio to those that chose their stocks based on risk and return considerations. It transpired that both groups were no statistically different on returns they offered investors, which led to the observation that CSR committed firms shown similar CFP as the other businesses.

Evidence for a positive association of responsible management and financial standing can be found in the largest portion of articles on the topic, although some of them report rather weak effects and were often less than perfect from the methodological viewpoint.

One example of a recent study reveling positive bottom-line impacts of social responsibility, is a research by Torgusa et al. [2011] who investigated 171 Australian SME manufacturers from the machinery and equipment sector and found medium strong effect (beta=0.54) from proactive CSR to financial performance, controlling for firm size, experience in CSR and several aspects of organizational culture that were assumed to contribute to how intensive and well implemented CSR efforts were. Probably the biggest validity
issue here were financial performance measures that involved self-reported managers’ perceptions of how much worse or better their firm fared on profit margin and ROA compared to similar firms in their industry.

In another study Tang et al. [2012] did longitudinal analysis of data from a third-party database that contained metrics on involvement in several aspects of CSR as well as financial measures. The sample with complete data for a period from 1995 to 2007 encompassed 130 mostly large American enterprises of diversified profiles. The outcomes imply that the financial impact is positive (in terms of ROA and ROE) if a company introduces CSR gradually, over long period of time, starting with internal dimensions of social responsibility and then moving outwards. The findings seem to underscore the role of organizational learning and the need to absorb CSR principles into organizational culture before any benefits can materialize. This could explain why efforts of some firms aimed at environmental protection, consumers or supply chain, but without the right organizational culture in place, did not translate into discernible financial benefits. The study’s main weakness is questionable representativeness and possible self-selection bias, since the complete records of CSR involvement, which made a company eligible for analysis, were probably more likely for firms with successful CSR programs that were more willing to make such disclosers.

Examples of other research that provided evidence on positive ties between social responsibility and financial performance include papers by Peters and Mullen [2007], Rettab et al. [2009], and Wagner [2009].

Conceptualizations and Measurement Scales

The research entailed measuring two central concepts: CSR involvement and financial performance.

Previous studies employed many approaches to establishing the level of CSR commitment in firms. Among the more popular were: 1) counting and evaluating CSR disclosers in investor reports, press releases, web pages and other media, 2) CSR reputation ratings derived from databases maintained by specialized third party research organizations, 3) own observations by researchers of corporate processes and their visible outcomes, and 4) manager self-reports on social policies through multi-item scales.

This current study relied on a multi-item scale to determine involvement in CSR. This choice was informed by the adopted data gathering procedure (a questionnaire based survey), the general lack of CSR disclosures from SMEs and the absence of a third-party database with social responsibility evaluations in Poland.

The particular scale used here was adapted from the system of metrics developed as a part of a European Union initiative for promoting social responsibility among small
and medium firms [European Commission, 2005]. It was meant to be employed as a self-assessment tool for managers and entrepreneurs to provide them with an appreciation of the level of their firms’ alignment with typical practices of responsible business. For the current research, the scale items were modified from its primary questioning format with yes/no answers to Likert-type statements with six response options reflecting varying levels of agreement. Otherwise the scale was used in a form as close to the original as possible, notwithstanding a translation to Polish and a number of minor adjustments to make the items more comprehensible and relevant to interviewed managers, as suggested by pilot tests preceding the actual survey. The complete list of scale items was given in Table 1.

**TABLE 1. Multi-item measurement scale for CSR involvement**

<table>
<thead>
<tr>
<th>CSR subconstruct 1: Workplace Policies</th>
<th>Item content</th>
<th>SEM model designation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>We encourage our employees to develop skills supporting their long-term careers via a performance appraisal process and training plans.</td>
<td>WP_1</td>
</tr>
<tr>
<td></td>
<td>There are measures in our company to prevent various forms of discrimination in the workplace and recruitment (e.g. against women, handicapped, ethnic minorities etc.).</td>
<td>WP_2</td>
</tr>
<tr>
<td></td>
<td>Our management consults with employees on important issues.</td>
<td>WP_3</td>
</tr>
<tr>
<td></td>
<td>Our employees have a suitable protection against health and safety risks.</td>
<td>WP_4</td>
</tr>
<tr>
<td></td>
<td>Our employees earn sufficient salaries to ensure their financial safety.</td>
<td>WP_5</td>
</tr>
<tr>
<td></td>
<td>Our employees can maintain good work-life balance, for example, by flexible working hours or work from home.</td>
<td>WP_6</td>
</tr>
<tr>
<td>CSR subconstruct 2: Environmental Policies</td>
<td>We try to reduce our environmental impact in terms of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Energy conservation</td>
<td>EP_1</td>
</tr>
<tr>
<td></td>
<td>– Waste minimisation and recycling</td>
<td>EP_2</td>
</tr>
<tr>
<td></td>
<td>– Pollution reduction</td>
<td>EP_3</td>
</tr>
<tr>
<td></td>
<td>Our company saves money by reducing its environmental impact (e.g. by reducing energy consumption, recycling, preventing pollution).</td>
<td>EP_4</td>
</tr>
<tr>
<td></td>
<td>In designing new products we consider their potential environmental impacts (e.g. by assessing energy usage, recyclability or pollution generation).</td>
<td>EP_5</td>
</tr>
<tr>
<td></td>
<td>Our company supplies clear and accurate environmental information on its products, services and activities to all interested parties (e.g. customers, suppliers and local community).</td>
<td>EP_6</td>
</tr>
<tr>
<td></td>
<td>Environmental friendliness of our products could be a source of a competitive advantage over our rivals.</td>
<td>EP_7</td>
</tr>
<tr>
<td>CSR subconstruct 3: Market Policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item content</td>
<td>SEM model designation</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td>Our company have a policy to ensure honesty in all its contacts and dealings with our stakeholders (e.g. suppliers, distributors, consumers etc.)</td>
<td>MP_1</td>
<td></td>
</tr>
<tr>
<td>Our company supplies clear and accurate information and labelling about products and services, including its after-sales obligations.</td>
<td>MP_2</td>
<td></td>
</tr>
<tr>
<td>Our company ensures timely payment of our financial obligations.</td>
<td>MP_3</td>
<td></td>
</tr>
<tr>
<td>We have a process to ensure effective feedback and/or dialog with customers, suppliers and other parties we do business with.</td>
<td>MP_4</td>
<td></td>
</tr>
<tr>
<td>We resolve complaints from customers, suppliers and other business partners without unnecessary delay.</td>
<td>MP_5</td>
<td></td>
</tr>
<tr>
<td>We work together with other companies and organizations to promote responsible business practices.</td>
<td>MP_6</td>
<td></td>
</tr>
<tr>
<td><strong>CSR subconstruct 4: Local Communities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We offer training and internship opportunities to members of the local community (e.g. youth, disabled persons etc.)</td>
<td>LC_1</td>
<td></td>
</tr>
<tr>
<td>When our operations are a source of controversy in the local community we engage in dialog with them to find a suitable solution.</td>
<td>LC_2</td>
<td></td>
</tr>
<tr>
<td>We try to purchase our supplies locally.</td>
<td>LC_3</td>
<td></td>
</tr>
<tr>
<td>We encourage our employees to participate in local community activities (e.g. by providing employee time and expertise, or other practical help).</td>
<td>LC_4</td>
<td></td>
</tr>
<tr>
<td>Our company gives regular financial support to local community activities (e.g by charitable donations or sponsorship).</td>
<td>LC_5</td>
<td></td>
</tr>
<tr>
<td><strong>CSR construct 5: Company Values</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In our company there is a clearly defined system of values and rules of conduct.</td>
<td>CV_1</td>
<td></td>
</tr>
<tr>
<td>We communicate our company’s values to customers, suppliers, business partners and other interested parties.</td>
<td>CV_2</td>
<td></td>
</tr>
<tr>
<td>Our customers are aware of our company’s values and rules of conduct.</td>
<td>CV_3</td>
<td></td>
</tr>
<tr>
<td>Our employees are aware of our company’s values and rules of conduct.</td>
<td>CV_4</td>
<td></td>
</tr>
<tr>
<td>We train our employees on the importance of the company’s values and rules of conduct.</td>
<td>CV_5</td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration based on European Commission [2005].

It’s clear from the table that the items are grouped under five dimensions of CSR, each representing a different area of possible social duty for a company. All five dimensions are latent variables of reflective nature and are assumed to be manifestations of a single, more general construct of the second order labeled “CSR involvement”. Again, CSR involvement was supposed to be a reflective rather than formative construct and thus it was expected to be correlated in a similar way with every first order CSR factor.

It ought to be stressed that the above conceptualization of CSR is not the most common in the literature; what is used more often is a model with three first order latent variables, representing company’s activities pertaining to economic growth and prosperity, social
cohesion and environmental protection (as an example, such a model was recently used by Torgusa et al. [2012]. The author of this study is aware of only one instance where a measurement tool derived from the European Commission self-assessment form was employed in academic research; Matin et al. [2011] used the scale to investigate socially responsible initiatives in pharmaceutical companies, but beyond a basic reliability assessment with Cronbach's alpha the scale was not thoroughly tested. Even though there is no empirical evidence to unequivocally point at one measurement model as superior, the 5 element structure seems to be theoretically more compelling and hence possibly yielding more coherent patterns of factor loadings.

To assess a degree of financial success the current research relied on two measures: profit margin and ROA, which are both common indicators of profitability often used together in the same research projects as providing complementary information (see Lu et al. [2014] for an overview of financial indicators used in CSR literature). The first metric was calculated as a ratio of net profits over total sales for the completed year preceding the moment of an interview (i.e. 2012). The second measure represented the relationship of net sales to the total value of assets; to enable direct comparison with profit margin ROA was computed for the end of the year 2012. In contrast to most previous studies using survey method [e.g. Torgusa et al., 2012], the two metrics of financial performance were not acquired as managers’ perceptions during interviews but were sourced from a database with actual financial records for Polish companies owned by an independent research agency. Such a combination of self-reported (CSR) and objective indicators (CFP) contributes to validity and reliability of findings.

Research Hypotheses and Conceptual Model

In light of the above discussion it is possible to propose the following hypotheses for the study:

H.1 Involvement in CSR in Polish manufacturing companies is a second order reflective factor with 5 first order reflective subfactors representing the main facets of responsible business: Environmental Policies, Workplace Policies, Market Policies, Relations with Local Communities and Corporate Values.

H.2.1 Involvement in CSR is positively correlated with sales profit margin.
H.2.2 Involvement in CSR has no direct association with return on assets.
H.2.3 Sales profit margin is positively correlated with return on assets.

For enhanced clearness the relationships encapsulated by the hypotheses were also depicted in Figure 1.
Sampling Method

This current work is using data gathered in a survey of managers in July and August 2013. In particular, the interviews were conducted through a combination of CATI and CAWI methods, whereby managers were interviewed by telephone while seeing the web-based version of the questionnaire. This approach enabled using more complex questions and scales due to enhanced communication between respondents and field workers as compared to the ordinary CATI. The sample included 220 completed interviews for a response rate of 39%.

Sample units were drawn at random from an exhaustive database encompassing almost every industrial company in Poland owned by the research agency that was commissioned to conduct the interviews. Subsequent comparison of the net sample and population distributions on known characteristics did not reveal any statistically significant differences, which suggests that the obtained return rate did not compromise generalizability. The database contained validated financial metrics on the companies, two of which, ROA and sales profit margin, were used in the current study to supplement survey results.

Due to missing values and inconsistent answer patterns strongly implying measurement errors, the data file effectively employed in this study numbered 187 observations. The companies represented by respondents were almost equally split between small (10-49 employees) and medium (50-250 employees). All of them were manufacturers operating in Poland in consumer centered industries, mostly food production (75%) but also beverage (15%) and cosmetics (10%).
Statistical Analysis

Statistical methods employed in the study involved exploratory factor analysis (EFA) and structural equation modeling (SEM).

As a first step, the questionnaire scale items for measuring CSR Involvement were checked for consistency to see if sets of manifest variables (see Table 1) assumed to measure individual subconstructs of CSR were indeed loading strongly on only one latent variable. To this end, exploratory factor analysis was performed separately for each of the five groups of items. For the sake of compatibility with SEM, the factors in EFA were estimated with the maximum likelihood method. The EFA revealed that some of the measures did not seem to represent their respective constructs satisfactorily. Therefore in instances where manifest variables correlated with more than one latent variable the indicators that loaded stronger on a weaker factor were removed from the further analysis. The discarded variables were assumed to measure different constructs notably due to idiosyncrasies of the studied industry, its particular economic and legal context, and also in consequence of some response biases. One example of a rejected item was the statement “There are measures in our company to prevent various forms of discrimination in the workplace and recruitment (e.g. against women, handicapped, ethnic minorities etc.)” (designated as WP_2), which shown very little variance (most respondents were disagreeing) and a lack of association with other variables within the Workplace Policies construct. This was probably due to strict legal obligations on employers to prevent such incidents and because managers likely assumed that the question concerned some extraordinary measures beyond what is ordinarily required from them by law, which in their opinion was unnecessary. In addition, the problem of certain forms of discrimination in Poland is felt less strongly due to a more ethnically homogeneous society as compared to most countries in the West, where the scale was originally developed. Also, work equality of women in Poland was ranked second in OCED countries, surpassed only by Norway (The Economist, 2014). As another example, MP_2, which concerns clear and fair information policies including labelling, also shown low variance and dissimilarity with theoretically related items, again possibly as a result of a high uniformity of food, beverage and cosmetics manufacturers, which are required by law to disclose all relevant information about their products. In summary, the rejected indicators were not necessarily universally wrong measures of respective constructs, rather they did not fit this specific research context of consumer goods manufacturers in Poland.

As a result, out of the 29 items in the original set of indicators only 20 were used in the subsequent SEM modelling. The qualified variables included 4 of 6 initial metrics for Workplace Policies, 4 of 6 for Market Policies, 3 of 5 for Local Communities, 4 of 7 for Environmental Protection and all 6 original items for Company Values.

The hypotheses of the study were examined by estimating a SEM model in AMOS 22 – a computer program capable of capturing all interactions represented in a conceptual
model and examine them as a single statistical test. In addition, SEM method provides individual metrics for evaluation of particular bivariate relationships.

The graphical representation of the model together with standardized estimates of regression weights was shown in the next figure.

FIGURE 2. Path diagram for a structural model of interactions between involvement in CSR and financial performance

Source: own elaboration.
In line with the conceptual model (Figure 1), the path diagram depicts CSR involvement as a second order reflective construct expressed through 5 first-order subconstructs, representing different aspects of CSR. The subconstructs were each inferred from their respective sets of questionnaire items, here shown as rectangles. The specific meaning of each item can be found in Table 1, where the multi-item measurement scale was presented in detail.

Before discussing specific parts of the model it is essential to establish its quality as a whole. To this end, a number of typical, overall goodness of fit measures was determined (Table 2). In a general sense, fit indices inform to what extent the model is capable of recreating the covariance matrix obtained from empirical data, though they take different assumptions and use varied formulas. As an aid in interpreting, threshold levels were listed that according to recommendations in the literature distinguish well-fitting SEM solutions [See Garson, 2012].

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Threshold for a well-fitting model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square/df (relative chi-square)</td>
<td>1.685</td>
<td>&lt;2 for good fit, &lt;3 for acceptable fit</td>
</tr>
<tr>
<td>p-value for the model</td>
<td>&lt;0.001</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>CFI (comparative fit index)</td>
<td>0.916</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>AGFI (adjusted goodness of fit index)</td>
<td>0.829</td>
<td>≥ 0.8</td>
</tr>
<tr>
<td>RMSEA (root mean square of approximation)</td>
<td>0.061;</td>
<td>≤ 0.05 for good model fit; ≤ 0.08 for adequate fit; in addition, the upper 90% confidence limit (HI 90) should be no more than 0.08 for a well-fitting model</td>
</tr>
<tr>
<td></td>
<td>H190=0.072</td>
<td></td>
</tr>
<tr>
<td>PCLOSE (p value for testing the null hypothesis that the population RMSEA is no greater then 0.05)</td>
<td>0.063</td>
<td>≥ 0.05</td>
</tr>
</tbody>
</table>

Source: own elaboration. Cutoff points based on Garson [2012].

The fit indices indicate that the structural model can be accepted as offering an adequate approximation of empirical data. Indeed, one of the tests – the chi square test – suggests that the solution could be lacking in accuracy, as the p score of less than 0.05 leads to rejecting the null hypothesis of no significant differences between the observed covariance matrix and the one reproduced from the model. However, the chi square test is thought to be unreliable, particularly for large sample sizes, often giving too large values signaling the need to reject otherwise adequately fitting models [Byrne 2010, pp. 76–77]. For that reason a number of additional indices are available for assessing the reliability and validity of a CFA solution, relying on different features of the model fit and using various assumptions about data. In fact, “although the chi-square value should always be reported
it is widely considered acceptable to conclude that a model fits the data well, even when the value is statistically significant, if other preselected fit indices meet their established criteria for fit” [Bowen, Guo, 2012, p. 142]. This is the case with the current analysis: 5 indicators alternative to the chi-square test denote a well-fitting solution, which is a strong enough reason not to reject the model.

The overall fit metrics do not reveal much about reliability and validity of individual latent variables. This purpose is served by three additional metrics, computed individually for each subconstruct of the model and listed in Table 3.

### TABLE 3. Reliability and validity measures for component constructs of CSR involvement

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>AVE</th>
<th>MSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace Policies</td>
<td>0.75</td>
<td>0.45</td>
<td>0.21</td>
</tr>
<tr>
<td>Local Communities</td>
<td>0.76</td>
<td>0.52</td>
<td>0.15</td>
</tr>
<tr>
<td>Environmental Policies</td>
<td>0.86</td>
<td>0.61</td>
<td>0.19</td>
</tr>
<tr>
<td>Market Policies</td>
<td>0.71</td>
<td>0.34</td>
<td>0.30</td>
</tr>
<tr>
<td>Company Values</td>
<td>0.86</td>
<td>0.53</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Source: own elaboration.

Cronbach’s alpha is a commonly used internal reliability measure of multi-items scales, with a value of 0.6 or greater indicating one dimensional and highly consistent scales [Malhotra, 2014, p. 287]. Considering that alphas for all five factors are beyond that threshold it is fair to say that the scales for all subconstructs have a sufficient level of reliability.

Convergent validity indicates to what extent a factor explains its manifest variables or indicators and is often established with the AVE metric (AVE standing for Average Variance Extracted). It is assumed that AVE values of more than 0.5 are acceptable [Hair et al., 2010]. In the current study two factors – Market and Workplace Policies – do not meet that criterion. Particularly problematic is the Market Policies subconstruct, which on average accounts for only 34% of variance in its indicators, with the other factor being much closer to the cut-off point. One likely explanation for those low AVE values is that the factors in question are supposed to measure CSR impact on human relations and market behavior of the companies, which is also strongly influenced by other determinants, quite unrelated to CSR. As such, indicators chosen to measure those aspects of CSR were also dependent on general corporate strategy, competition intensity, local labor market conditions, required level of skills of workforce and other considerations which were not directly controlled by the survey. Accounting for those influences would require introducing additional latent variables to the model that would make it more complex without explicitly improving our understanding of CSR. Hence, following the principle
of parsimony in model design it seems reasonable to accept the relatively low AVE values on those two factors.

The third important aspect of quality of scales for measuring latent variables is discriminant validity, which looks at the extent to which a factor is explained better by its own indicators instead of by indicators from other factors. Discriminant validity is determined by comparing AVE to MSV (maximum shared variance); it is assumed that a model is acceptable if AVE scores are greater than MSV scores for all its constructs [Hair et al., 2010]. Based on this criterion the present model shows adequate discriminant validity.

The last thing about the CSR measurement model that requires explanation are correlated error terms for indicators under two subconstructs: Market Policies and Company Values. The correlation links were introduced to the model to improve data fit following suggestions of modification indices. Using the modification indices provided in the AMOS output it was possible to identify the error terms that if correlated offered the most substantial gains in the model fit as measured by drops in the model chi-square value. While it is permissible to modify measurement models by correlating error terms, it should be done cautiously and only when reasonable substantive justification for new parameters can be provided (for more information on the usage of modification indices see the discussion in Mulaik [2009, pp. 342–345]. In general it is usually considered acceptable to correlate residuals under one construct, but not across constructs, which would be a clear sign of a misspecified model. It is because of the nature of error terms, which in regression analysis are taken to represent all unexplained variance in indicators, both due to measurement biases and as a result of influences from external factors that were not included in the model [Hoyle 1995, pp.172-173]. This seems to be the case in the current analysis: the indicators which residuals were correlated are likely to be shaped by latent variables other than those related to CSR, like individual management style, prevailing organizational culture or competitive pressures. As such, the associations between indicators implied by those modifications seem to be plausible and, hence, could be accepted as a valid part of the model.

Having identified a seemingly feasible measurement model of CSR involvement it is now possible to evaluate Hypothesis 1, which asserted that CSR is a second order reflective construct with 5 subconstructs, as specified in Figure 1. Based on the model diagnostics discussed earlier, bearing in mind that several indicators were discarded as not well fitting the constructs, it is rather safe to conclude that the proposed measurement model is an acceptable representation of CSR. It is not possible though to say if it is superior to other alternative conceptualization, as that would call for a direct comparison of competing models. This, in turn, would require including alternative indicators in the questionnaire, which was not practical due to limitations on the average length of the CATI interview. However, testing rival CSR models could constitute an interesting avenue for further research. In conclusion, the analysis conducted on the measurement model gives support to Hypothesis 1.
Continuing with the analysis of the model, the next step is centered on its structural part, consisting of regression paths among CSR Involvement, Sales Profit Margin and ROA. The strength and direction of the relationship between CSR and Sales Profit Margin is given by a standardized regression weight of 0.2 at a significance level of 0.021. It indicates a rather weak but significant and positive relationship between the two variables, which implies that CSR was one of many possible determinants of profitability: perhaps not particularly strong (accounting for only 4% of variance) but most likely contributing to increased profit margins. This small but seemingly real effect size lends partial support to Hypothesis 2.1.

The regression weight between CSR and ROA was almost null and not significant at the 0.05 level. Consequently, there was no systematic relationship linking the two metrics and thus Hypothesis 2.2 was rejected.

As was to be expected, both financial metrics were positively correlated ($\beta=0.34; p<0.001$). Even though the relationship is not strong it provides evidence in favor of Hypothesis 2.3. The fact that correlation is not greater is explained by profound differences in how efficiently the investigated companies utilized their assets: at one end of the spectrum were very agile firms with high sales to assets coefficients (i.e. asset turnover ratios), at the same time a large portion of companies apparently had considerable slack resources and underutilized facilities, which made for low asset turnover scores.

Practical and Theoretical Implications of the Study

The study investigated a very popular but still controversial topic of a possible influence of socially responsible management practices on financial performance of companies. It revealed that though statistically significant the strength of the impact of CSR on CFP is miniscule, which challenges many of the recent works in this area [e.g. Torgusa et al., 2012; Rettab et al., 2009; Wagner 2009]. At the same time it corresponds in terms of general conclusions with several other studies which shown a weak or no relationship between the two concepts [Nelling et al., 2009; Barnet, Salomon, 2006; Yu et al., 2009; Bush, Hoffmann, 2011]. From the overview of methodological aspects underlying the above cited research, with both positive and neutral results, it seems that stronger positive links between CSR and CFP were more often found in those papers which relied on manager perceptions of financial metrics instead of validated accounting measures. It could reflect a certain measurement bias and a consequent amount of spurious effect, possibly due to respondents – more or less subconsciously – giving overly optimistic estimates of financial outcomes to reflect a generally positive reputation of socially responsible practices. Also, it seems that less positive outcomes emerged more often in those studies that had a tighter focus on the environmental dimension of CSR; this also seems to be justifiable, as efforts
aimed at lessening negative environmental impact tend to involve expensive capital investments and positive financial effects – if real – can be felt only after a considerable delay. In fact some of the studies explicitly confirm this observation: for instance Nelling and Webb [2008] found the only significant correlation between financial performance and employee related CSR, though they argued that the first is the actual cause and not the latter. Considering that in the measurement model obtained in the current study CSR Involvement was tied the strongest with the management related subconstructs may explain a statistically significant correlation of CSR with profit margin and may suggest that after removing environmental policies from the model the correlation could be even greater. Though admittedly noteworthy, due to space constraints here, this analysis option will be pursued on another occasion.

This study findings, due to limited contribution to the sales profitability and no discernible effect on ROA, suggest that any commitments to CSR that would demand considerable investments should be approached by managers cautiously. Given unlikely immediate and positive changes to the bottom line, the rationale for such efforts probably should not involve improving profitability, at least not in the short term. On the other hand, it can be argued that the multi-item scale that was employed for evaluating the degree of proactive CSR at work in the surveyed firms did not involve many items that directly pertained to high profile, expensive projects; hence – with the likely exception of environmental impacts – most of the measures were possible to be brought in without significant capital outlays. The scope of the research also did not include any attempts at quantifying firms’ spending on socially responsible policies. Thus, it follows that the slight improvements in profit margins due to compliance with CSR principles may be well worth the effort if achieving it was not very costly in terms of initial outlays and maintenance. It is also worth noting that profit margin, by relying on net profits in the numerator of the formula, implicitly factored in all recurring costs, so the profit gains truly appear to have slightly outweighed the necessary incurred costs. However, the CSR effort may still not be in the best interest of a company due to alternative opportunities which were forfeited in favor of CSR. Managers, it seems, ought to compare proposed CSR projects against rival initiatives, also vying for their attention and rare corporate resources. With the above considerations in mind, it is fair to say that the current study increases the number of scholarly works with neutral outcomes as far as the link between CSR and CFP is contemplated.

The second major contribution of the survey is validating the conceptualization of CSR as a second order latent variable with five facets of social effort encapsulated by five different first order constructs. It was also shown that both second and first level constructs are reflective in nature (versus formative) and can be effectively determined by indicators administered through manager self-reported survey. This observation, on top of its theoretical consequences, also has practical application as it allows managers to self-study their companies regarding their CSR commitments and identify areas for improvement.
In addition, the research adds to the extant body of literature on CSR in small and medium companies operating in emerging economies, which is still sparse in comparison to developed countries. In fact, this project is the first of this kind in Poland, where so far many of empirical studies on CSR dealt mainly with charitable marketing, in particular from the consumers’ perspective [Zaborek, Mirońska, 2013; Mirońska, Zaborek, 2014].

The study seems to compare favorably to other similar projects completed in other countries in terms of its methodological attributes. The outcomes are arguably more trustworthy than some other studies because of directly asking managers about their perceptions of how CSR is used in their companies rather than relying on more general ratings derived from third-party databases. In addition, to overcome problems with certain respondents tending to misrepresent financial data, the relevant values were taken from a database with validated financial statements of investigated firms.

Limitations and Directions for Further Research

The main limitation of the study is that the generalizability of its findings may be restricted to the food, beverage and cosmetics industries in Poland. This group of firms have their own idiosyncratic features that were shaped by the culture, history and geographic position of Poland. On the other hand, it the recent years these industries have been modernizing intensely in response to competitive pressures from imports and FDIs from other EU countries and also to be well positioned to benefit from ample exporting opportunities in the European Common Market and beyond. Considering that Poland is one of the major exporters of food in Europe it is reasonable to assume that this sector is at least comparable from a technological and organizational standpoint to its Western counterparts. Nevertheless, any interpretations that would extend beyond the direct target population should be made with caution. It is conceivable but far from certain that similar data patterns will repeat themselves in other traditional, customer oriented industries, which would warrant further research to verify if replication is achieved. As another possible direction for further study, it would be interesting to see a comparative analysis of similarities and discrepancies in B2C service and manufacturing companies.

The study is cross-sectional in nature which is also limiting in that the correlation patterns observed are less likely to represent bona-fide causal relationships, especially when effects are delayed [Malhotra, 2010, pp. 78–79]. As was reported earlier in the paper, there was a general tendency in the literature for longitudinal studies analyzing firms over longer periods of time, to show weaker links between CSR and CFP [Nelling, Webb, 2008] so if that was the case with the general population for this research, the overall conclusion of the weak correlation between CSR and CFP would probably remain unchanged. Nevertheless, a longitudinal design is a logical direction in which to take the follow-up research.
The study is also somewhat hampered by the sample size of 187 observations, which is not particularly large for an SME analysis. For that reason, the author decided to keep the model as simple as possible and not include several possible moderating variables (e.g. firm size, ownership status, export involvement, amount of direct contacts with final customers etc.), which could refine the analysis but would also result in diminished power of the statistical tests. As it stands, the sample size was sufficient to detect the rather weak correlation between CSR and CFP, but it would be interesting to see a more complex structural model tested with a larger data set.

Finally, considering that not much is known about the relationship between outlays on CSR efforts and their operational and financial effectiveness (in particular among SMEs), a worthwhile contribution to this stream of management research would be to attempt to estimate yearly expenditures on CSR activities and include this variable as a moderator in the relationship between CSR involvement and CFP.

References


The Economist (2014), The glass-ceiling index: The best and worst places to be a working women, March 6th.


How to Investigate Polish Clusters’ Attractiveness for Inward FDI? Addressing Ambiguity Problem

Abstract

The aim of the paper is to assess whether, and in what fashion, managers of Polish cluster organizations perceive the attractiveness of foreign direct investment in Polish clusters. This research is exploratory and qualitative in nature. The complex nature of Polish clusters, which can benefit from and be competitively challenged by, FDI are identified and a conceptual framework for assessing that nature is proposed; specifically, research using the grounded theory method (GTM).

Keywords: Foreign Direct Investment (FDI), cluster attractiveness, Grounded Theory Method (GTM), Poland

JEL: F23, D02

Introduction

Multinational enterprises (MNEs) have distributed their value chains globally and use an international network of subsidiaries to take advantage of the specific profile
of different environments [Sölvell, 2002; Ketels, 2008; Mudambi, Swift, 2011]. Targets include huge markets characterized by low labor costs, higher efficiency or easier access to resources and, increasingly, knowledge, as stipulated by the ARK model (A-activities, R-Resources, K-Knowledge) [Ricart et al., 2004, p. 189]. Attractive external environments therefore include knowledge-intensive ones, which are quite often associated with clusters. Descriptions of the characteristics of clusters are abundant. By compiling the most common elements of these descriptions, one can define a cluster as a group of interlinked entities – private and public, scientific and commercial ones specializing in related industries (one sector or a family of branches) located in a given area. Clusters can be conducive to productivity, new business creation, or stimulation of innovation, but vary widely in scope and composition. Given the plethora of FDI types and their purposes, it is difficult to discern which clusters desire, or seek to discourage, direct foreign investment.

The aim of the paper is to assess the perceptions of FDI among managers of Polish cluster organizations. The paper is organised as follows. First the complex nature of cluster attractiveness for FDI, and the challenges arising from this phenomenon, will be touched upon. Then the results of empirical research focusing on cluster attractiveness for foreign investors in Poland will be presented. The findings, which suggest the ambiguous character of cluster attractiveness in Poland, lead the authors to propose a framework for operationalizing further study in this area by applying the GTM to the ambiguity of FDI in Polish clusters. The paper concludes with some reflections on the limitations of the GMT approach, and suggestions for further research.

In doing so, it bears emphasis that the GTM method is relatively new and underused. The specificity of this approach in its original form operates with little or no reference to other theories, [Strauss, Corbin, 1990], and we do not claim that this approach is a definitive one for cluster research. Rather out goal is to open a research discussion aiming at better operationalizing this problem in a way that facilitates more precise, well-designed, and deeper field studies in the future.

**Are Clusters Attractive for Inward FDI? – Some Literature Findings**

Scholarly literature, as well as the popular press, have attributed numerous benefits to clusters [Enright, 2000; Porter, 2000; Sölvell 2003; Andersson 2004; Yehoue, 2005; Mindelfart-Knarvik, Overman, Venables, 2001; Audretsch 2000; Belderbos, Carree 2002; Brakman, Garretsen, van Marrewijk 2001; Duranton, Puga 2003; Guimaraes, Figueiredo, Woodward 2000; Head, Ries, Swenson 1995; Keeble, Wilkinson 2000; Krugman 1994; Maskell, Kebir 2005; Misala 2003; Ottaviano, Thiss 2004; Overman, Redding, Venables 2001; Puga, Venables 1995; Siebert 2000]. From this body of published works three groups of factors relevant to FDI attractiveness in clusters can be distinguished. The first speaks
to the financial benefits of an agglomeration, e.g., backward-forward linkages such as relations between suppliers and consumers and the existence of a specialized labor market. The second accentuates the technological benefits of agglomeration; that is, processes of knowledge dissemination, as well as existing knowledge bases (local research in states, universities etc.).

In this regard, clusters usually possess knowledge base (universities, labs etc.) and knowledge mechanisms (informal contacts, formal learning etc.), which constitute a knowledge environment. Side effects or hidden traps of a knowledge environment may, however, also occur. From an MNE’s perspective, diffusion, absorption, and availability of knowledge are of high importance. Foreign firms entering new markets try to neutralize a lack of knowledge about local business procedures, and an unfamiliarity with other local factors by „launching” learning processes [Petersen, Pedersen, 2002]. The third group of FDI factors touches upon uncertainties felt by foreign investors and the social and institutional dimension of the benefits of agglomeration. This broad concept, which includes various types of unfavourable factors such as information asymmetry, cultural distance etc., stresses liability, “alien status”, and other non-locality problems faced by entities entering foreign markets [Caves, 1971]. Uncertainty can be understood in terms of transaction costs and “organizing capacity.” It seems reasonable to assume, that this capacity (which clusters are supposed to provide) “including social support, public-private partnerships, views, strategies, and leaderships as intangible assets” [Van den Berg et al. 2001, p. 7], could contribute to enhancing an atmosphere of trust.

A model by E.B. Yehoue offers a formal, mathematic way of presenting *sensus stricte* clusters as a policy tool for attracting FDI [Yehoue, 2005]. Referring to agglomeration economies, Yehoue argues that a cluster can increase return on investment and, thus, firm profits, increasing tolerance for distortions to a greater degree than if there wasn’t any cluster in place. The model focuses not on natural resources driven FDI, but on FDI driven by locational spillovers or agglomeration externalities, in which spillovers include both intellectual as well as physical processes. As proposed by Yehou, clusters are attractive directly and indirectly. model can be understood twofold. Directly, clusters result from a spatial concentration of entities conducing economic activity. Simultaneously conducted investment projects – both domestic and foreign – positively influence profits through backward and forward linkages, and thus attract new firms. Indirectly, clusters, when local companies concentrate, thrive, and provide government with extra budget income. This enables authorities to reduce burdens hampering FDI inflow, such as tax rates. Yehou argues that agglomeration economies generated in a cluster make investment there more profitable, and the location more attractive, for foreign firms.

The literature therefore associates FDI with clusters that exhibit the following characteristics: environments conducive to knowledge creation, dissemination and accumulation; social proximity and an atmosphere of trust; and public support and institutional structures as well as phenomena such as spin-offs or internalized externalities. To determine if
these characteristics also apply in the Polish context, the authors conducted exploratory research among Polish cluster managers. The results of that research are presented in the next section.

**Attractiveness of Clusters in Poland for Inward FDI – What do We Currently Know?**

The growing importance and popularity of clusters and cluster-based policy in the world is mirrored in activities of inward investment agencies that have harnessed clusters aiming to attract FDI. In Poland clusters are viewed as an attractive areas to invest in, with potential still to be exploited. Yet there is essentially no empirical research to substantiate these common beliefs.

To begin addressing this gap, the authors conducted exploratory research on cluster organizations and developed by cluster initiatives. The results of that research are the beginning of what should be a process that enriches our knowledge by identifying how clusters are perceived among practitioners and as a background for further discussion.

**Research Method**

The investigation of the advantages of Polish clusters for foreign investors was a part of a broader research effort focused on the internationalization of clusters conducted by the authors. Internationalization is recognized as the process of developing links with foreign entities – in this sense it is related to foreign expansion of cluster entities (active, outward-oriented internationalisation from the perspective of cluster inhabitants and a cluster organization) and expansion of foreign entities into clusters (passive, inward-oriented internationalisation from the perspective of cluster inhabitants and a cluster organization). The inflow of FDI signals internationalization of a cluster. The “community” of cluster inhabitants becomes international and local companies obtain access to knowledge, business practices, and strategies of foreign origin without expanding abroad themselves. Here, we examine FDI inflow to clusters in a broader context to investigate whether Polish cluster organizations (i.e., entities tasked with strategy and daily management of operations) exploit the advantages clusters can offer to foreign investors and if these organizations recognize expansion of foreign firms into the clusters as being important for the expansion of cluster inhabitants abroad. In particular, cluster managers were asked whether the cluster organizations they represent:
were looking for foreign business partners and foreign partners from the science/R&D sector?
• supported cluster firms in entering foreign markets and, if yes – with what target markets and entry strategies?
• were interested in attracting foreign investors and promoting the cluster and, if yes, using what form of promotion, what funds to finance these activities, and offering what advantages to foreign firms investing in cluster?
• were motivated by either cluster firms or the administrative sector; that is, were local or regional authorities fostering the internationalization of the cluster, or was it being done on their own initiative?

Method of Data Collection

The number of cluster organizations in Poland differs by data source. Forty-five Polish cluster organizations are registered in the European Cluster Observatory (www.clusterobservatory.eu), which are now followed (and researched) by the Polish Agency for Enterprise Development (PAED). PAED, in turn, established an interactive map of clusters in Poland (http://www.pi.gov.pl/PARP/data/klastry/index_en.html), which identifies 145 cluster organizations. Empirical research on the attractiveness of clusters in Poland for FDI was conducted in May 2014. As a research tool the authors used a structured, multiple answer questionnaire initially sent to cluster managers via e-mail, supplemented by calls to respondents.

Characteristics of the Sample

Since the interactive PAED cluster organizations map doesn’t include direct contacts to each of 145 cluster organization, the authors had independently develop direct contacts to cluster managers, and emailed questionnaires to 94 of them. Sixty-six respondents confirmed receiving the email, and 49 of them sent back the questionnaire. Among respondent clusters were organizations from each region of Poland. The legal forms of those organizations were formal co-operative agreement (32 respondents), associations (14 respondents), limited liability companies (2 respondents) and one cluster represented by a chamber of commerce that formally functions as an association. The industrial specializations of clusters represented by cluster organizations (CO) that participated in the research were: metallurgy (6 COs), construction (6 COs), energy (5 COs), tourism (5 COs), food (4 COs), IT (4 COs), logistics (3 COs), recycling (3 COs), design and other creative industries (3 COs), advertising (2 COs), the chemical industry (2 COs) and 1 CO from each of the following: business services; aviation; the exhibition industry; life sciences;
education; and furniture, though numerically small, as a percentage of all Polish COs the sample is considered satisfactory.

Research Results

Seventy-six percent of respondent cluster organizations have been trying to encourage foreign companies to join the formalized cluster through a subsidiary or as foreign business partners of Polish enterprises participating in the cluster. Foreign partners are characteristic in COs representing the food and IT industries, and each such respondent Polish CO indicated that they were looking for foreign partners. There are good reasons for doing so. Polish food products are currently recognized as being of a high quality products, but had to first undergo deep restructuring to adjust their operations to European Union standards. They have the ability to cooperate with foreign partners and compete on foreign markets. The IT industry in Poland is characterized by, on the one hand, many micro and small companies (including start-ups that operate like born globals) and, on the other hand – a high potential to develop international R&D and commercial projects. This potential is based on the deep competences of Polish IT specialists and Polish R&D institutions (e.g., the Poznan Supercomputing and Networking Center). Actions aimed at luring FDI to clusters have been implemented by 49% of cluster organizations. These activities have relied more on promoting a cluster’s products than on promoting its location. Among all COs that participated in the study, only 9 (18%) promoted to indirectly lure new companies to invest. Among them were COs representing the following specializations: IT, recycling, the chemical industry, logistics, aviation, metallurgy and life sciences. In most cases, these COs represent clusters with a high critical mass (number of companies). The manager of one of these COs stated he was encouraged by both regional and state authorities to attract foreign investors to the cluster. Only 15% of respondents confirmed the presence of foreign investors in the cluster area. These respondents operate within the following specializations: metallurgy, IT, life sciences, the chemical industry, and recycling. It may be that cluster organizations do not carefully monitor FDI inflow to clusters they represent, or are not sufficiently interested in creating links between local companies and foreign ones operating in the Polish market.

The set of advantages that a cluster could offer to foreign firms entering the Polish market includes tax advantages, existing infrastructure, access to human capital (qualified but low cost employees), access to the market, and to resources. When asked which type of advantage they offered foreign firms, the most frequent answer was human capital (19%). In the opinion of these cluster managers, Polish workforce is well educated and relatively cheap. The next most cited advantage was infrastructure (10%), followed by tax advantages and access to the market (in both cases 8%). Access to resources was not
mentioned as a significant advantage. Four cluster managers (8%) pointed to such other factors as: personal contacts, access to European Union Funds, low costs of conducting business and a culture of innovation in the region.

Fully 54% of cluster managers in the science and R&D sector have been looking for foreign partners. Among them there are COs with the highest number of participants (at least 99 entities) representing: metallurgy, IT, the chemical industry, aviation, exhibition, construction, and tourism. Characteristic features of these specializations include a strong focus on innovative products, which requires R&D cooperation with partners preferably operating in different circumstances (countries) to more quickly recognize alternative creative solutions.

The study revealed that promoting foreign expansion by cluster inhabitants prevails over attracting newcomers to clusters from abroad. Sixty-nine percent of COs stated that they had supported their members expansion in foreign markets and indicated the form of foreign operations.

This finding is in conflict with a previously one; that less than half of respondents targeted foreign firms to encourage them to locate in a cluster. It is worth mentioning that after sending the questionnaire via e-mail, the authors called the Cos, explained study goals, and tried to answer any questions related to it. This process revealed that some respondents were concerned that foreign subsidiaries could threaten local firms, take market share, capture the best qualified human resources, and then stop doing business in Poland in favor of operating more cheaply elsewhere. These anxieties underscore the ambiguous nature of clusters and foreign investors for Polish enterprises. Some cluster managers identified the benefits for foreign investors operating within clusters, and others expressed anxiety about the entrance of foreign investors to clusters. To better assess enterprise manager perceptions, qualitative research is required. The grounded theory method may offer a promising approach to doing so.

Ambiguity of Cluster’s Attractiveness – How to Conceptualize this Phenomenon?

The results of the pilot study confirmed the authors’ initial observation, based on in-depth critical literature review, that there is no consensus about how the plethora of FDI types and their motives are perceived. Certain identified barriers suggest that a particular cluster’s characteristics may be detrimental to investors. Mentioned channels facilitate knowledge inflow to a company but are also responsible for possible outflows – i.e., losses. Subsidiaries which exploit their own competences usually adapt to the local environment and become the channel of competence transfer from the parent company to a cluster. They do not intend to capture local knowledge in the way subsidiaries creating
knowledge do. As observed by many experts, the majority of foreign subsidiaries are usually oriented towards gradual incremental adaption to local markets [Frost et al., 2002]. This may facilitate an increase of the knowledge assets pool in a cluster, such that parent companies of subsidiaries located in a cluster are at risk of leaking certain competencies [Sanna Randaccio and Veugelers, 2007].

Other studies [Belderbos et al., 2008] draw attention to the fact that perceived knowledge spillovers by foreign investors may depend on whether they are technology laggards or leaders. Technology laggards tend to regard knowledge spillovers as a positive factor that attracts them to a given place. The opposite is true for technology leaders, who may be deterred from locations offering high knowledge spillovers, which are perceived as threats. Studies by Belderbos, Lykogianni, and Veugelers suggest that the attractiveness of knowledge spillovers from involuntary leakages of knowledge possessed by FDIs (mainly from leading technological countries) give rise to ambiguity. Pedersen underlines that knowledge flows through informal contacts and employee mobility may have negative effects. Loss of information to competitors could potentially weaken a firm’s performance [Pedersen, 2005].

Another problem refers to what Pedersen calls “epistemic communities” and their narrow scope. Epistemic communities are groups of networked experts who possess knowledge in a particular area, share the same beliefs and notions of validity based on particular set of criteria for evaluation. Their perception of reality is similar since they share normative commitments and are involved in common policy projects. As argued by Pedersen, physical proximity does not imply the existence of social proximity, since such epistemic communities never include all members of the local community. In small epistemic communities centered around single firms, knowledge circulates in that community rather than flowing freely within clusters [Pedersen, 2005]. Accordingly, knowledge may be inaccessible to both those located nearby and for foreign entities. Moreover, as stressed by Andersen and Christensen, MNEs require more than local knowledge, and also need internal-external knowledge interfaces [Pedersen, 2005]. Combining newly accessed and existing knowledge within a company, and disseminating it across the company, pose a challenge for MNEs. This chain of steps, which needs to be taken into account, can be termed a move from localized to corporate excellence.

Agglomeration economies including labor pool and backward-forward linkages are regarded by New Economic Geography as centripetal forces. Acting in the opposite direction are centrifugal forces – agglomeration diseconomies. When a firm enters a region and starts production it increases demand for upstream activities (thus expanding the home market), but also increases local supply of downstream output, leading to the market crowding effect [Bekes, 2004]. These two forces work against each other, and agglomeration occurs when the market expansion effect dominates the market crowding effect. In a cluster, centripetal forces are accompanied by centrifugal forces. When centrifugal forces exceed the centripetal forces, cluster decreases its attractiveness, and congestion is
one of the emerging disadvantages. Cluster development may lead to increasing demand for a specialized skilled workforce and, thus, to increased wages [Pedersen, 2005]. Cantwell mentions competitive deterrence effects [Cantwell, 1989]. This means that a high concentration of enterprises is perceived as a negative factor repelling new entrants from a given location. A cluster's disattractiveness may result from the fact that they are “structurally equivalent organizations”, which means that companies have to compete with each other to acquire vital resources [Audia, Sorenson, 2000].

Porter speaks about inertia and “group thinking” – referring to rigidity about change and adoption of new ideas – which ultimately may lead to a lock-in situation [Porter, 2000]. Learning new skills is easy and unlearning old habits is tough [Van den Berg et al., 2001]. Endangered by sclerosis and petrifaction, clusters must be open to external energy to avoid an entropic death.

When MNEs enter a cluster, that entry may be perceived negatively by local inhabitants – employees, leading to social disturbances, lack of a willingness to cooperate etc. Lorenzen and Mahnke [2004] draw attention to social barriers existing in clusters, such as suspicion towards FDI or even threats of social sanctions against foreign companies. It is possible for most newly arriving firms to establish direct relations with local enterprise(s), invest heavily in them and, hence, build mutual trust and shared understanding. It may be much more difficult to become part of a network of indirect relations, because such networks are often ‘identity based’, i.e., based on social conventions and unarticulated ways of qualifying for trust and acceptance [Maskell et al., 2003]. MNEs may be excluded from some indirect relations and / or incumbent firms may ‘hide’ social norms or communication principles, allowing the newcomer into social networks but refraining from explaining how, where, and when local information sharing takes place. The severity of imposed barriers depends on how the incumbent firm view newcomers. Nachum and Wymbs [2005] claimed that the very homogenous culture of a cluster makes it more hermetic (airtight) and less accessible for foreigners discouraging them from the cluster. This is particularly true for FDIs originating in culturally-distant countries, which increases the difficulty of integrating in the cluster and taking an active part in the local collective learning that determine the benefits of a cluster’s location [Yehoue, 2005].

Spinoffs, so popular in clusters, may have negative effects on mother firms [Pedersen, 2005]. The likelihood of a parent organization’s survival decrease when highly skilled senior employees leave to found new firms. A parent–brain–drain represents a disruption in the routines of the parent, which clearly affects the future of the firm.

Duranton and Puga highlight the problem of inefficient herding, assuming that the wrong decision can be multiplied and repeated by other cluster members, since entities tend to replicate each other [Duranton, Puga, 2003]. This effect may increase cluster vulnerability to external shocks as well as contribute to subsequent cluster decline. The institutional framework present in clusters may facilitate the operation of FDI, but it
can also constrain it. Institutional thickness can provide for rigidity, limiting or even inhibiting activities.

High transparency and peer pressure observed in clusters may positively affect information asymmetry experienced by foreign investors and reduce the transaction costs they have to incur. However, Mody, Razin and Sadka have found, while investigating the role of information in driving FDI, that the degree of corporate transparency in the host country is negatively correlated with FDI flows [Mody et al., 2002]. The results obtained by these authors point to the fact that a transparent environment in the host country may be regarded by some FDI as detrimental to their profits. This is because the rent stemming for unique knowledge declines.

Summing up this part of the discussion, existing studies, although inclined to argue that clusters are indeed a place worth investing for foreign companies, point out the possible disadvantages of doing so. Cluster attractiveness is conditional, depending on a concrete dyad – the circumstances, stage of given cluster life cycle stage, particular type of FDI etc. Our closer look at three identified sources of cluster’s attractiveness for FDI has revealed that the knowledge environment, agglomeration economies, as well as the social dimension of the cluster concept may be regarded as negative phenomenon [Götz, 2008]. In fact, under some circumstances they may adversely affect companies residing inside the cluster and/or deter new companies from coming.

The observations do not undermine the previous conclusions regarding cluster attractiveness for FDI, but do underline the relativity of the identified factors. It is indisputable that clusters offer many tailor-made resources, facilitate production and learning processes, enable scale and scope economies, reduce risk etc., as the mainstream literature rightly points out, leading policy-makers around the globe to create science and industrial parks and enable agglomerations development. Nevertheless, the growing more recognition of the perceived side effects and unintended consequences of clusters have been gaining attention as well. They may result from having reached a certain level of cluster life cycle development, as the advantages provided may vary over time, eventually giving rise to certain disadvantages. They may also reflect the interaction between clusters and FDI, which is inherently cluster specific, depending upon the particular circumstances of individual cluster and a given investor’s size, nature, mode, type etc.

The literature and results of the pilot study suggest that the ambiguity embedded in a cluster’s attractiveness equates with the shifting balancing of certain factors, presented below (Table 1).
TABLE 1. Ambiguity – proposed scheme of switching points

<table>
<thead>
<tr>
<th>agglomeration economies</th>
<th>-&gt; agglomeration diseconomies</th>
</tr>
</thead>
<tbody>
<tr>
<td>pool of suppliers, lower prices, more consumers</td>
<td>-&gt; turn into pay rise, crowding out, resources becoming scarce</td>
</tr>
<tr>
<td>conducive knowledge environment</td>
<td>-&gt; unfavourable knowledge environment:</td>
</tr>
<tr>
<td>knowledge sharing, learning</td>
<td>become knowledge leaking</td>
</tr>
<tr>
<td>uncertainty reduction</td>
<td>-&gt; uncertainty increase:</td>
</tr>
<tr>
<td>lower transaction costs, community spirit, peer pressure</td>
<td>-&gt; growing burden of institutional thickness, risk of specialisation, herding effects</td>
</tr>
</tbody>
</table>

Source: own elaboration

This balance of factors will necessarily be unique for each cluster, rendering the creation of a framework for developing a unifying theory for clusters generally, based on empirical data, problematic.

Design of the Study on Cluster’s Attractiveness for FDI by GTM. The Proposed Approach

Our proposal for doing so – the grounded theory method – is possible thanks to the systematic identification, development and provisional verification of emerging theory in an iterative process of data collection and analysis [Strauss, Corbin, 1990]. The origins of grounded theory can be found in the work of Glaser and Strauss, who saw in the gradual iterative collection and analysis of information a way to generate theory strengthened through empiricism [Glaser, Strauss, 1967]. The main alternative to this approach, called classical by Glaser and Strauss, was proposed by Charmaz [2009] who stressed the role of the researcher involved and who questioned the neutrality of obtained findings. Eisenhardt, in turn, offers a complex look at the generation of theory based on empirical material, suggesting the road-map for this process [1989] and listing subsequent steps. Given the combination of factors impacting cluster attractiveness for FDI, GTM may be warranted as an approach that goes beyond qualitative single case studies, while addressing the shortcomings of conventional quantitative studies.

The grounded theory method is most used in the social sciences, sociology, anthropology, and to some degree psychology, and less so in economics, management and entrepreneurship. Most likely, this is accounted for by the nature of the processes occurring in business (in the widest understanding of that term), which is predominately cause-and-effect, more structured and well-planned, and minimizes the role reflection, emotion, or identification by the researcher with a given problem.
The GTM is a potential way to study relationships between clusters and FDI, if properly designed. Useful GTM guidelines are proposed by Eisenhardt [1989] (Table 2).

**TABLE 2. Suggested sequence of research steps**

<table>
<thead>
<tr>
<th>Step</th>
<th>General presumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definition</td>
<td>Precise definition of research problem; topic under investigation – defining basic categories for further explanation while avoiding outright hypothesis formulation.</td>
</tr>
<tr>
<td>2. Selection</td>
<td>Selection of the sample, that is, a set of inhabitants. The relatively small group of those &quot;willing to talk&quot; determines de facto so-called saturation, which is achieved when there are no additional data and it is possible to develop properties for categories. Nevertheless, the presence of inhabitants from firms of various sizes, financial backgrounds, and specializations enable fulfilment of the maximum diversity requirement [Patton, 1990].</td>
</tr>
<tr>
<td>3. Instruments</td>
<td>Varieties of information collecting methods – linking qualitative and quantitative data, improving grounding by triangulation, benefiting from synergies of evidence.</td>
</tr>
<tr>
<td>4. Field study</td>
<td>Flexible method of data collection, sampling and memoing, writing notes in the field, modifying and specifying questions in the process of “learning by doing,” agile adjustments to previous design, course corrections, casualties, feedback.</td>
</tr>
<tr>
<td>5. Data analysing – desk study</td>
<td>Both intra-case and inter-case (throughout and cross case) analysis, searching for patterns, rules, regularities, introducing further amendments if necessary.</td>
</tr>
<tr>
<td>6. Hypothesis formulation</td>
<td>Iterative flexing of the original research problem/ agenda with inflowing evidence. Searching for logic between causes, reasons for interdependencies, confirmation and confrontation, in order to validate or negate preliminary assumptions by discovered regularities.</td>
</tr>
<tr>
<td>7. Saturation/ literature consultation</td>
<td>Assessing findings with existing literature, reaching the saturation if possible, or sufficiency (Charmaz).</td>
</tr>
</tbody>
</table>

Source: Authors’ modification of Eisenhardt’s proposal [1989].

Consistent with suggestions and guidelines in the literature regarding GTM, the authors propose a study design for probing the problem of the ambiguity of clusters in attracting FDI.

Step 1. Formulating the key concepts of the study with the central issue – the ambiguity of cluster attractiveness for FDI. This ambiguity, as indicated in earlier studies, would need more precise definition; in particular a specification of the tensions threshold, i.e., points at which factors facilitate or inhibit FDI should be undertaken. It would also be desirable to specifically define what constitutes the attractiveness matrix. Possible sources, such as the proposed trio – Agglomeration economies, Knowledge and Uncertainty involving competition, should be more precisely described and potentially broadened. This stage also requires deciding which cluster types and FDI profiles need to be included to assure...
the maximum variety of groups. The literature suggests that cluster attractiveness is conceptually defined in terms of pecuniary agglomeration economies, knowledge environment, and uncertainty reduction. Ambiguity, i.e., double-edge character of cluster attractiveness, is here defined as the shifting balance between advantages and disadvantages ascribed to these sources (Table 1). This approach implies assuming certain thresholds when positive externalities/economies or centripetal forces are outweighed by negative externalities/diseconomies and centrifugal forces. Though, a priori, no specific critical value/mark can be set or reasonably expected. It may therefore be of great importance to find out how involved actors perceive, interpret, and value this.

In this study foreign direct investment is understood in terms of M&A, Greenfield or Brownfield projects conducted within a cluster. The research focuses on clusters that meet certain agglomeration economies criteria (critical mass of entities concentrated in a given area and operating in a given sector), and are represented by a cluster organization.

Step 2. Selecting respondents should be based on a non-probabilistic process guided by the research focus. The chosen sample should exhibit a high level of variety. Initially, the decision should be made as to relevant clusters, bearing in mind their size, age, technology advancement, domestic/international character etc. Reference to existing typologies would be useful in this respect. Next, interviewers representing different kinds of investors (if suitable, enriched by cluster representatives) would be selected. The selection starting point might be the list of clusters established and published via PAED. To assure a relatively good representation of various types, the proposed short list of clusters should encompass high-tech and traditional industry, discovered (perhaps) using existing cluster classifications and official cluster directories to identify and select various cluster types, e.g., hub and spoke, satellite, endogenous or transplanted, science driven or industry pushed etc. In so doing, one should bear in mind certain tacit requirements of FDI presence. Once cluster types have been chosen, interviewers should be identified. Preferably, various foreign investors should be approached – representing different countries, modes of entry, and economic activity. The alternative to such heterogenous research material (different clusters combined with various FDI) might be a precise identification of specific target groups, e.g., either only advanced technology clusters or investors coming from a given country [Squicciarini, 2009]. This stage includes scheduling interviews.

Step 3. Preparing the instruments of data collection would focus mainly on drafting (semi) structured interviews or scenarios of in-depth interviews that include both closed and open questions. Conducting research according to the Corbin and Strauss version of GTM would mean preparing ex ante (semi) structured interviews that navigate the whole process, whereas the serendipity idea, as originally proposed by Glaser, would favor more spontaneous, unstructured exploration. The reference to theories is not clear. While some argue that such a filter would pre-conceptualize the exploration, others claim that a certain familiarity with the topic being investigated is recommended. The authors believe that the second approach is more suitable, and advocate for structured questions
or at least a list of the problems to be raised. Bearing in mind the topic under investigation – the ambiguous attractiveness of clusters for FDI – attention should be paid to the problem of alien status; that is, a foreigner’s liability, which would profoundly affect the perception of the whole set of factors i.e. what may be advantageous and accessible for local indigenous firms may be beyond reach for companies coming from abroad. The concept of ambiguous attractiveness would mean dividing the research into at least three groups of issues – pecuniary agglomeration, knowledge and institutional aspects of clusters. In other words, generating clear data facilitating the development and application of a substantive theory would be furthered by a precise list of issues to be addressed in the field, which should be prepared/drafted in advance. This requires a precise definition of the problems being explored and a structuring of the field interviews that, in the authors’ opinion, should draw on existing concepts and empirical evidence.

Step 4. Conducting meticulous observations of in-depth interviews, preferably with various representatives of given investors to assure a certain triangulation of sources. Conducting research strictly in line with the GTM guidelines requires a degree of researcher embeddedness – in business studies this may pose a challenge. Chief executive officers and managers tend to be reluctant to share knowledge, fearing competitors. Therefore, eliciting valuable information might mean falling back on various sources, long-term meticulous observations, and interviewing lower level managers and staff. As envisaged by the GTM guidelines, the first tranche of information received might imply a course correction and modifications of earlier assumptions, or the expansion of interviews to new entities worth investigating but not foreseen as valuable at the start of the research. Clusters operating in legally organised forms serve as platforms for their members (e.g., meetings, seminars, networking opportunities), and participating in such events may enable the capture of relevant information. At this stage, researcher reflections (however broad) would be recorded as potentially valuable input.

Step 5. Analysis of collected material searching for patterns, similarities, differences, investor subgroups, and subcategories of cluster advantages. At this stage, it may become necessary to modify earlier assumptions – e.g., the originally conceived turning point/switching moment when positive, centripetal forces turn negative. For instance, one may presume that such a perspective may apply only to pecuniary agglomeration economies, i.e., labor pool and backward-forward linkages. For a knowledge environment, this approach might be not appropriate. In order to arrive at a substantive theory well-grounded in empirics, it may be reasonable to seek out tools embedded in the data by drawing graphs, diagrams etc. One may expect a resulting matrix of possible relationships between clusters, FDI, and given sources of examined FDI attractiveness. This process would encompass labelling the units of data (i.e., open coding), and then collapsing them into high order constructs.

Step 6. Proposing research hypothesis. A possible research proposition emerging from the study might be that “SME investors may accept higher level of diseconomies due to
a lack of alternatives as far as the provision of certain benefits is concerned than investors in MNEs who are more vulnerable to centripetal forces”. Interpretation of the complex phenomenon of ambiguous cluster attractiveness may point to the idiosyncratic problem of foreign investor preferences. In this phase, data would be integrated into theoretical concepts.

Step 7. Reaching saturation/sufficiency and assessing results with reference to the existing literature, should conclude this process.

Given the ex ante theoretical filter / sensitization applied, it seems that this literature review can be reasonably limited or perhaps even skipped. It makes sense to refer to other studies and concepts if GTM is applied purely in sense of serendipity and researcher starts as *blank carte* without any previous knowledge. In other cases, particularly when interviewers selection has been heavily influenced by earlier desk research such reference does not seem necessary.

Despite its attendant rigor, design of a high level of serendipity (as advocated by the classic GTM approach) is recommended. An analysis conducted from the classic GTM perspective originally proposed by Glaser would presumably focus on emerging categories thanks to application of a “coding paradigm,” i.e., open, axial, selective and theoretical coding. It is beyond the scope of this paper to list all possible codes that result from simple open coding, i.e., ascribing labels and indentifying key words line by line of text. More feasible is identifying likely categories. The authors suggest that the central one might be “seeking the balance of power, stipulating what makes the cluster attractive place to foreign investors is the right combination of factors with advantages outweighing disadvantages”. In the authors’ view, in light of actual obstacles with acquiring information, different approaches in subsets of GTM (classic, revisionist and constructivist) and ambiguity as to how use it in practice (based on arbitrary applications in earlier studies), the hybrid approach combining the advantages of all attitudes is recommended. This means constant comparisons and iterative modifications and course corrections. Reference to existing theories before commencing a field study seems reasonable as well in the authors’ opinion. If not a strictly coding paradigm, than a family of codes, should be applied. Due to possible difficulties with reaching so called saturation as suggested by Glaser, seeking sufficiency of research might be good alternative. In other words, a combination of the classic approach of Glaser (assuming spontaneous grounding) with revisionist attitude of Strauss and Corbin (advocating rigorous systemizing) would be most the beneficial for the quality of the study.

Due to assorted difficulties and restraints involved with factual theory and empirical data, the GTM shall be treated simply as a sort of analytical structure. Yet, it has the potential to be harnessed for complex processes and phenomena such as cluster attractiveness. A research process on ambiguous cluster attractiveness for FDI embedded in the GTM framework can be designed as follows:

- from the process of memoing (writing memos) open codes may emerge,
• grouping of codes should enable the isolation of concepts,
• these concepts may become the starting point for the formulation of working categories with reference to the coding paradigm or axial coding,
• comparing cases would enable the generalization of categories and reformulation of the concepts into the properties of these categories,
• simple connections between established categories, including selecting the central category (selective coding) would enable the configuration of a substantive theory (theoretical coding).

Thus, as a result of work in empirical data, a certain hypothesis can be “grounded” or established, approximating a substantive theory within the GTM framework and, at the same time, serving as a research proposal for further analysis in the area of the ambiguous role of clusters regarding FDI.

Conclusions and Limitations of the Study

As Steiner stresses, there is no universally accepted methodology for analyzing clusters. The balanced approach taken in this paper – weighing cluster advantages against possible disadvantages – addresses the criticism that the cluster concept is superficial and chaotic; a sort of policy and academic fashion item equating quite different types, processes and spatial scales of economic localization under a single all-embracing universalistic notion [Martin, Sunley, 2002]. The urgent need for studying FDI and, more generally, the international dimension of Polish clusters, clearly emerges from the authors’ own research conducted on selected cluster organisations. The findings suggest a low level of awareness in this respect, accompanied with good intentions and willingness for internationalisation.

The empirical study suffers from some limitations. Firstly, the results are based on the perception of cluster attractiveness of managers who represent COs. There is no guarantee that their view of reality reflects the view of foreign investors. To get more reliable findings, interviews with particular foreign companies that invested in Poland within Polish clusters should be conducted. Secondly, the results are a snapshot. A longitudinal study will be necessary. The limited sample being examined does not enable any generalisation, but the findings can be treated as a good exemplification of a certain problem. The outcome can serve as a good indication of the need for further in-depth studies. Since the qualitative approach seems recommended given the peculiarity of the problem under investigation and likely difficulties with proper operationalization necessary for quantitative study, the importance of the right design of further research process cannot be underestimated.

Against the background of peculiar challenges occurring when investigating the ambiguity of clusters in the context of attracting FDI, the grounded theory method (GTM) might be a promising alternative. Conducting research with this method requires the
correct design of the whole examination, to overcome objective stumbling blocks. The most important and widespread one in qualitative field research being to organize the group of those “willing to talk”, to gather participants who agree to take part in in-depth interviews, and to obtain necessary information from businesses where data may be considered confidential. The GTM implies significant researcher involvement in interpreting collected data, the coding processes, and subsequent generation of a unifying theory – all of which may contain the researcher’s bias, which cannot be ignored and (if present) will affect the final results. The outcome thus needs to be regarded with caution as substantive theory / middle range theory is meant to be an abstract interpretation of a given contextualised process. That being said, this does not reduce the research power of the GTM, particularly when the topic under investigation is a relatively new/under-investigated, complex process and when the aim of the study is not to specifically test existing theories but rather to explore a certain issue. The GTM may be regarded as residing somewhere in between a simple “case study” devoted to a single firm on the one hand, and mass quantitative studies based on a large population of entities on the other. In this way, it can address some of the problems arising from the above methods – it goes beyond dwelling on one case, while enabling a more detailed in-depth analysis that is often impossible in large panel studies. Whiteley [2000], suggests in this respect the use of the term “grounded research” to emphasize that in some situations the grounded theory method cannot be applied in its pure form. Although, in light of existing obstacles using pure grounded theory may be impossible; it is possible to carry out research in its spirit. The GTM offers an interesting alternative framework for examining the role of clusters for foreign investors, which might help foster a better understanding of the idiosyncratic nature of these links. Patterns and regularities recognised thanks to GTM should be subject to further robust quantitative investigation if possible, and also pave the way for new research topics.

The value added of the presented study consists in conceptualizing the problem of ambiguous cluster attractiveness for FDI based on the review of literature, and an attempt to operationalize it for the purpose of research using the grounded theory method. Specifically, this paper highlights the double edge character of cluster allure for investors while simultaneously recognizing that such attractiveness is multi-dimensional. Moreover, due to the role played by knowledge in contemporary economics and business, it elaborates the knowledge dimension of attractiveness more deeply. It offers a certain simulation of research devoted to this aspect that would use the guidelines of the grounded theory method. The results of this unique pilot study on Polish cluster organizations offer valuable insight into the phenomenon that we propose to call a “passive, inward-looking internationalisation of clusters” denoting the inflow of foreign firms into clusters and actions facilitating this, as opposed to an “outward-looking internationalisation” referring to the expansion of local companies abroad and steps undertaken to foster this processes. The outcome – although based on relatively small sample – certainly can enrich existing scarce knowledge with respect to cluster internationalisation [Jankowska, 2010, 2013]. Summing
up, this paper is a conceptual one exploring GTM as a way to better understand the ambiguity of clusters and FDI, underpinned by pilot empirical research on Polish clusters.

References


Misala, J. (2003), Współczesne teorie wymiany międzynarodowej i zagranicznej polityki ekonomicznej, Szkoła Główna Handlowa w Warszawie.


Patton, M.Q. (1990), Maximum variation sampling, Qualitative evaluation and research methods, Sage, London.

Pedersen, Ch. (2005), The Development Perspectives for the ICT sector in North Jutland, PhD Thesis, Aalborg University, Department of Business Studies.


www.clusterobservatory.eu

Ewa Baranowska-Prokop
Tomasz Sikora

International Management and Marketing Institute,
Warsaw School of Economics

Relationship Between Competitive Strategies and the Success Perception of Polish Born Globals

Abstract

The key objective of this paper is to describe and evaluate the competitive strategies applied by Polish born global enterprises. To reveal these strategies, two competitive models developed by M.E. Porter are applied to an original data set obtained from 256 small and medium Polish enterprises through a survey employing the CATI technique. The outcomes of these strategies, as perceived by the companies applying them, are also evaluated against two hypotheses. We conclude that Polish firms apply both basic strategies of competition, i.e. cost leadership strategies and differentiation strategies and that a substantial majority of companies perceive themselves to have succeeded on the market.

Keywords: born globals, competitive strategy, managerial perception of companies’ success

JEL: L.10, M.10, M.31

Introduction

Rapidly expanding market globalization since the early 1980s has created incentives for many firms (including small and medium-size enterprises (SMEs)) to explore newly offered possibilities of international expansion. Some SMEs were established with a focus on international markets expansion. These SMEs were named born globals by M.W. Rennie [1993, pp. 45–52]. G. Knight and S.T. Cavusgil [1996, p. 11] described born international companies as small firms engaged in developing new, advanced technologies. There
is no widely accepted term defining these companies. In the literature they are called *global start-ups* [Jolly, Alahuhta, Jeannet, 1992], *international new ventures* [B.M. Oviatt, P.P. McDougall, 1994], *born internationals* [Majkgard, Sharma, 1999], *early internationalizing firms* [Rialp, Rialp, Urbano, Vaillant, 2005] etc.¹

The most common criteria for identifying born globals, given by G. Knight and S. T. Cavusgil [1996], are as follows: (1) SMEs starting internationalization within the first three years of being established; that (2) earn at least 25 per cent of their revenues on international markets.

Research on Polish born globals started at the end of 1990s [Nowakowski, 1999]. Later, the body of knowledge on the subject was extended by such authors as M. Gornyia [2007], K. Przybylska [2010, 2013], J. Cieślik [2010], E. Duliniec [2011], W. Nowiński [2011], M. Jarosiński [2012], and I. Kowalik, and E. Baranowska-Prokop [2013]. J. Cieślik [2010] was the first to observe that three quarters of Polish exporters started selling abroad during the first three years of their initial business activities, and concluded that the phenomenon of early internationalization is widespread among Polish exporters. Some authors focused on such characteristics of Polish born globals as the pace of the internationalization process, the number of served markets, and the physical distance to target markets [Nowiński, Nowara, 2011; Morawczyński, 2007; Przybylska, 2010].

In the current paper we describe and evaluate the competitive strategies applied by Polish born globals, and then report how these firms perceive their own success in applying them. We based our analysis on the basic born globals definition offered by G. Knight et al. [2004] with one minor modification – we researched firms established after 1989.

### Theoretical Background

To achieve sustainable competitive advantage requires employing the right competitive strategy. The most popular classification of competitive strategies was offered by M.E. Porter [1992] who implied that regardless the complexity of the problem, there are only two sources of competitive advantage, i.e., low costs and product differentiation.²

A *cost-leadership* strategy occurs when a firm supplies undifferentiated product to the target market at a lower price than its competitors, relying on a lower cost structure. Cost reduction can be achieved through standardization, scale economies, experience, and also thanks to the advantages of acquiring supplies in large quantities. Small companies have little chance to benefit from such forms of cost reduction and, therefore, the *cost-leadership* strategy may be difficult for them to implement. Medium-size enterprises have a greater chance to become cost leaders on structurally fragmented markets, or B2B markets, because in these situations unique cost-reducing technology may play a crucial role. However, it should be noted that a current technological advantage may be quickly lost to market followers. In many niche markets even small firms can play the role of leader, applying
a low-cost strategy, but that strategy can only be sustained by maintaining outstanding technological capabilities [Knight et al., 2004; Knight, Cavusgil, 2004; Moen, 2002]. Since technological advantage matters less in the case of FMCG, or standard services, medium and small firms are unlikely to be low cost leaders in these arenas.

The differentiation strategy focuses on making products more distinct in comparison to those offered by competitors. The main challenge in implementing this strategy is to determine the right differentiation factor, positively distinguishing a firm’s offered products among customers on the target market that are also difficult for competitors to imitate. Because the focus here is on product, not cost, the differentiation strategy offers greater opportunity for SMEs to deploy their strengths – innovativeness and creativeness. SMEs may also expand their differentiation strategy beyond core product features, and improve the standards of accompanying services, or offer other benefits. Perhaps for these reasons, a quantitative study by McDougall et al. [2003] clearly indicates that born globals are likely to compete by applying differentiation strategies.

In our current research on Polish born globals, the strategies’ classification by Porter [1992] was applied:

- differentiation, i.e., search for competitive advantage in selected areas, e.g., quality, technology etc. (see Table 1 and Table 2),
- cost leadership in production and distribution (cost dominance), which allows firms to offer a lower price in comparison to competitors (see Table 3, Table 4 and Table 6),
- concentration (or focus), i.e., adjustments to the needs of selected target segments.

The market concentration strategy has been omitted from this work because we assume that the basic strategies, i.e., differentiation or cost leadership, are used by SMEs from our sample in niche markets. Porter emphasized that the concentration (or focus) strategy may also be differentiation- or cost leadership-oriented: “The strategy rests on the premise that the firm is thus able to serve its narrow strategic target more effectively or efficiently than competitors who are competing more broadly. As a result, the firm achieves either differentiation from better meeting the needs of the particular target, or lower costs in serving this target (...). Even though the focus strategy does not achieve low cost or differentiation from the perspective of the market as a whole, it does achieve one (...) of these positions vis-à-vis its narrow market target” [Porter, 1998, pp. 38–39].

Method of Data Collection and Hypotheses

Data has been collected from February 7 till March 15, 2013, using computer assisted telephone interviews (CATI).

A sample of 256 enterprises with between 10 and 249 employees was selected. Small enterprises employing 10–49 people accounted for 52.3 per cent of the sample, and medium-size firms employing 50-249 people constituted the remaining 47.7 per cent. Average
annual sales revenue was below 2 million euros for 51.6 per cent of the sample, revenues in the 2 to 10 million euro range were reported by 40.6 per cent of enterprises, and sales of 10 to 50 million euro were earned by 7.8 per cent. Each interviewee was responsible for some aspect of the firm’s relationship with its international partners. Among the analyzed firms 40.2 per cent were established between 1990 and 1995 and 38.3 per cent between 2001 and 2008. Only 3.5 per cent were established after 2008.3

The sample consisted of manufacturing firms, representing the following industries: food (14.1 per cent), plastic (12.1 per cent), and metal processing (11.3 per cent), timber industry (9.4 per cent), and the machine tools industry (9.4 per cent).

M. E. Porter’s concept of basic competitive strategies can be considered as dyadic, i.e., either cost dominating or based on product differentiation. It leads to three strategic alternatives for firms: cost leaders, companies with highly differentiated product, and strategic clutter firms that lack a clear vision (stuck-in-the-middle). It should be noted, that recent research on strategic management reveals the possibility of simultaneously applying different strategies for separate business units (brands) within the same company [Baroto et al., 2012; Acquaah, Yasai-Ardekani, 2008; Oviatt, McDougall, 1994]. But such a situation is more feasible for large companies, composed of several (at least two) business units, or that own at least two brands.

In the case of SMEs, the possibility of simultaneously applying two significantly different competitive strategies is considerably reduced by size and homogeneity (however, it cannot be entirely excluded). Another more probable case for SMEs may occur when a company switches dramatically from differentiation to cost leadership or the other way around (but the latter switch is much more difficult to implement, because the brand-differentiation process requires considerably more time and promotional effort than does cutting prices).

We test the following research hypotheses:

**H1. Having a clearly-defined strategy leads to better results (higher evaluation of a company’s success) than having no strategy.**

**H2. The differentiation strategy leads to better results than cost-leadership strategy.**

H1 is derived from Porter’s description of the stuck-in-the-middle companies and from his convexity hypothesis, which implied a U-shaped relationship between ROI or profitability and market share [Porter, 1998, p. 43]. The issue of market share has not been taken into account in this research since it is less evident in the case of SMEs. However, since Porter associated the cost-leadership strategy with considerable market share [Porter, 1998, p. 36], while admitting that large market share may be incompatible with a differentiation strategy [Porter, 1998, p. 38], he seems to suggest that only a singular strategy (either cost leadership or differentiation) can generate high ROI (high profit or success).

H2 can be formulated and tested in the context of any SMEs enterprise, and not only in the case of born-globals. The lack of benefits from scale economies may put small firms at a disadvantage, compared to large ones.
In order to identify the type of strategy applied by born globals, we asked respondents to answer questions and evaluate pairs of statements.

For the *differentiation* strategy, the following two pairs of statements were formulated:

1. Our products are to a great extent similar to the ones offered by competitors. – Our products are significantly different from the ones offered by competitors (product similarity).
2. Our basic export product has many substitutes. – Our basic export product has no substitutes (product substitutability).

The following statements have been formulated for the *cost leadership* strategy:

1. In our firm, the most important issues are savings and continuous cost reduction. – In our firm, the issues of savings and continuous cost reduction are not the most important.
2. The prices of our basic export product are the lowest on the market. – The prices of our basic export product are the highest on the market (price competition 1).
3. We compete on foreign markets primarily through low prices (price competition 2).

In their answers to individual questions and pairs of statements, the respondents were asked to use a 5-point scale (with values from 1 to 5): strongly agree, rather agree, neither agree nor disagree, rather disagree, strongly disagree. The midpoint of the scale (value 3) should not be considered as the “don't know” answer (because such answers have been coded as missing and removed from analyses), but as an expression of an intermediate state of the phenomenon measured by the statements.

Hypotheses have been verified with one-way analysis of variance (ANOVA). All calculations have been conducted with the use of SPSS software.

**Competitive Strategy Evaluation**

The distribution of variables that were considered as constitutive for the strategy of *differentiation*, or for the strategy of cost dominance, are presented in the tables below.

The information related to specific questions has been recoded from the 5-point scale to a scale with three levels. When the distribution of answers was extremely asymmetric or some types of answers were given by a small number of respondents, recoded 3-categories variables have been also used for correlation analyses.

Table 1 presents the distribution of answers concerning the similarity of exported products to the products offered by competitors.
TABLE 1. The measure of differentiation strategy – Similarity of exported products to the supply offered by competitors

The answers to the pairs of statements: “Our products are significantly similar to the ones offered by competitors – Our products are significantly different from the ones offered by competitors”.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The first statement</td>
<td>134</td>
<td>52.3</td>
<td>53.0</td>
<td>53.0</td>
</tr>
<tr>
<td>Midpoint</td>
<td>55</td>
<td>21.5</td>
<td>21.7</td>
<td>74.7</td>
</tr>
<tr>
<td>The second statement</td>
<td>64</td>
<td>25.0</td>
<td>25.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>253</td>
<td>98.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

The data shows that about ¼ of companies use differentiation strategies. The majority (53 per cent) offers similar products to the products of competitors (thus, they may be treated as close substitutes). It is worth noting that about 1/5 of the respondents did not confirm either of the statements. Therefore, it can be concluded that, in general, the products offered for exports are similar to competing products (thus, their degree of differentiation is small).

Table 2 shows the results related to the existence of substitutes on SMEs export markets.

TABLE 2. Substitutes on export markets

The answers to the pairs of statements: “Our basic export product has many substitutes – Our basic export product has no substitutes”.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The first statement</td>
<td>149</td>
<td>58.2</td>
<td>59.4</td>
<td>59.4</td>
</tr>
<tr>
<td>Midpoint</td>
<td>40</td>
<td>15.6</td>
<td>15.9</td>
<td>75.3</td>
</tr>
<tr>
<td>The second statement</td>
<td>62</td>
<td>24.2</td>
<td>24.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>251</td>
<td>98.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

Table 2 shows that 24.7 per cent of respondents report that their basic export product has no close substitutes. Thus, these firms applied the differentiation strategy.
Summarizing the results of these two tables, we conclude that about 25 per cent of the sample used the product differentiation strategy.

Correlation between the two presented measures of differentiation strategy, i.e., answers to the pair of statements: “Our products are significantly similar to the ones offered by competitors.” and “Our basic export product has many substitutes.” is relatively weak, albeit positive with the expected sign. The Spearman’s rho correlation coefficient equals 0.374 (or 0.336 for the variables reduced to three categories, as in the tables 1 and 2), and reflects moderate coherence in the answers.

Another measure of differentiation strategy – quality of products – could not be applied, because respondents from almost all companies (above 93 per cent) claimed (agreed or strongly agreed) that their firms competed on foreign markets with products of the highest quality.

Table 3 illustrates the answers of the respondents related to the first measure of the cost-leadership strategy.

Table 3. The measure of cost-leadership strategy – the policy of cost saving and continuous cost reduction

The answers to the pair of statements: “In our firm, the most important issues are cost savings and continuous cost reduction – In our firm, the issues of cost savings and continuous cost reduction are not the most important”.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first statement</td>
<td>145</td>
<td>56.6</td>
<td>57.1</td>
<td>57.1</td>
</tr>
<tr>
<td>Midpoint</td>
<td>27</td>
<td>10.5</td>
<td>10.6</td>
<td>67.7</td>
</tr>
<tr>
<td>The second statement</td>
<td>82</td>
<td>32.0</td>
<td>32.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>254</td>
<td>99.2</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>0.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

Table 3 shows the distribution of answers by firms to the question about their policy of cost saving and continuous cost reduction. For the majority of respondents (56.6 per cent) cost saving and continuous cost reductions are primary strategic goals. It must, however, be noted that almost 1/3 of respondents (32.9 per cent) were prone to state that savings and expense reductions were not the most important in their strategy.

Table 4 presents the answers of respondents to the second measure of the cost dominance strategy.
### TABLE 4. The measure of the cost-leadership strategy – the prices of the basic export product

The answers to the pair of statements: “The prices of our basic export product are the lowest on the market – The prices of our basic export product are the highest on the market”.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The first statement</td>
<td>53</td>
<td>20.7</td>
<td>21.3</td>
<td>21.3</td>
</tr>
<tr>
<td>Midpoint</td>
<td>163</td>
<td>63.7</td>
<td>65.5</td>
<td>86.7</td>
</tr>
<tr>
<td>The second statement</td>
<td>33</td>
<td>12.9</td>
<td>13.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>249</td>
<td>97.3</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Lack of data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systemic lack of data</td>
<td>7</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

21.3 per cent of respondents confirm that the price of their basic export product is the lowest on the target market, 65.5 per cent of the respondents do not deny such statement, and only 13.3 per cent of respondents confirm that the prices of their basic export product are the highest on the market. Thus, it can be concluded that the dominant strategy of the latter group is different.

The Spearman’s rho correlation coefficient between the two measures of cost-dominance strategy is close to zero: \( \rho = -0.062 \) (or it equals -0.024 for the variables reduced to three categories). It means that these measures of cost-dominance strategy are not correlated.

The data cross-tabulation reported in table 5 suggests an explanation for this phenomenon.

### TABLE 5. Cross-tabulation between the statements related to the cost-leadership strategy

<table>
<thead>
<tr>
<th>The number of responses</th>
<th>The prices of our basic export product are the lowest on the market. – The prices of our basic export product are the highest on the market.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The first statement</td>
<td>Midpoint</td>
</tr>
<tr>
<td>In our firm the most important issues are cost savings and continuous cost reduction. – In our firm, the issues of cost savings and continuous cost reduction are not the most important.</td>
<td>29</td>
<td>95</td>
</tr>
<tr>
<td>The first statement</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Midpoint</td>
<td>21</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>163</td>
</tr>
</tbody>
</table>

Source: own elaboration.
In firms reporting the highest or lowest prices of their products, the importance of cost reduction was similar, with two exceptions: 21 firms selling at the lowest market price and reporting that the issue of cost reduction was not the most important, and 18 firms that despite the highest sales prices of their products, identified cost reduction as the most important.

Table 6 shows the distribution of answers to the third measure of the cost domination strategy – competition through low prices. It suggests that 46 per cent of respondents applied the strategy of low prices to achieve a competitive advantage. However, almost 36 per cent of respondents definitely declared not competing through low prices.

As in the previous case, the Spearman’s rho correlation between the answers concerning cost saving and continuous cost reduction with the answers about competition through low prices is close to zero: $\rho = -0.026$ (or it equals -0.046 for the variables reduced to three levels).

**Table 6. Competition through low prices**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid per cent</th>
<th>Cumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely not, or rather not</td>
<td>90</td>
<td>35.2</td>
<td>35.3</td>
<td>35.3</td>
</tr>
<tr>
<td>Midpoint</td>
<td>47</td>
<td>18.4</td>
<td>18.4</td>
<td>53.7</td>
</tr>
<tr>
<td>Definitely yes, or rather yes</td>
<td>118</td>
<td>46.1</td>
<td>46.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>255</td>
<td>99.6</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

However, the Spearman’s rho correlation between the answers to the two pairs of statements concerning quoting low or high prices (table 4), and to the question about competing through low prices (table 6) is about 0.4 ($\rho = -0.408$ for variables measured on 5-point scales and $\rho = -0.396$ for the variables reduced to three levels). This correlation is also moderate and similar to the correlation between two measures of differentiation strategy. The coefficient is negative, because high and low prices are at different ends of the scales for each of the two statements.
Relationship Between the Type of Strategy and the Firm’s Own Perception of its Success

The following two questions concerning firm success were posed to Polish born globals (measured on a 5-point Likert scale):
1. Considering financial indices (e.g. profitability), it can be concluded that our company has been successful.
2. Considering the situation on the (domestic and foreign) markets, where our firm operates, it can be concluded that our company has been successful in comparison to its competitors. Distribution of answers to the above two statements is shown in tables 7 and 8.

The respondents in the biggest group of firms declared that their companies achieved a moderate success, “rather” agreeing with the above statements. As in the case of cost-leadership and differentiation strategies, the two measures of success have not been strongly correlated: the Spearman’s rho correlation coefficient equals 0.441.

**TABLE 7. Distribution of answers to the first statement concerning firm success**

“Considering financial indices (e.g. profitability), it can be concluded that our company has been successful”.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely, not</td>
<td>4</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Rather not</td>
<td>12</td>
<td>4.7</td>
<td>4.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Midpoint</td>
<td>33</td>
<td>12.9</td>
<td>13.0</td>
<td>19.4</td>
</tr>
<tr>
<td>Rather yes</td>
<td>108</td>
<td>42.2</td>
<td>42.7</td>
<td>62.1</td>
</tr>
<tr>
<td>Definitely, yes</td>
<td>96</td>
<td>37.5</td>
<td>37.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>253</td>
<td>98.8</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.
TABLE 8. Distribution of answers to the second statement concerning firm success

“Considering the situation on the (domestic and foreign) markets, where our firm operates, it can be concluded that our company has been successful in comparison to its competitors”.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely, not</td>
<td>6</td>
<td>2.3</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Rather not</td>
<td>6</td>
<td>2.3</td>
<td>2.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Midpoint</td>
<td>48</td>
<td>18.8</td>
<td>19.3</td>
<td>24.1</td>
</tr>
<tr>
<td>Rather yes</td>
<td>116</td>
<td>45.3</td>
<td>46.6</td>
<td>70.7</td>
</tr>
<tr>
<td>Definitely, yes</td>
<td>73</td>
<td>28.5</td>
<td>29.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>249</td>
<td>97.3</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>256</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own elaboration.

To verify the hypotheses, we conducted separate analyzes, classifying firms that implement product differentiation strategy, and those who adhere to cost-leadership strategy, and considered each group of measures separately.

Initially, the classification of enterprises into three categories was based on measures of differentiation strategy – Table 1 (product similarity) and Table 2 (product substitutability). Firms, whose representatives agreed with the statement that their products were clearly different from products offered by competitors, and those whose representatives declared that their basic export product had no close substitutes, have been included in the strategic-differentiation group. Companies whose representatives chose the middle variant have been included in the undefined-strategy (stuck-in-the-middle) group. The remaining firms have been categorized as the cost-leadership group.

Alternatively, the type of strategy may be found by a similar analysis based on cost-leadership strategy measures – Table 4 (price competition 1) and Table 6 (price competition 2). Firms, whose representatives agreed with the statement that their product prices were the lowest in the market, and those whose representatives declared that they competed primarily through low prices, have been included in the cost-leadership group. Companies whose representatives chose the middle variant have been included in the undefined-strategy (stuck-in-the-middle) group. The remaining firms were categorized as the differentiation strategy group.

Given two measures of company’s success and four measures of strategy types, we can consider eight cases of relationships between firm success and strategy type.

A comment concerning sample size is necessary before presenting the results. Large samples increase the statistical significance of the results. Our sample included 256 SMEs,
but it represented various industries and respondents holding 18 types of managerial positions. This heterogeneity, by industry and respondent position, caused substantial variability in the data. It is beyond the scope of this article to take these elements into account, but it should be pointed out, that the industry type and the respondents’ status affected the mean of variables and the strength of their correlations.

The relationship between the type of strategy and the firm’s perceived profitability is shown below. Among the four cases resulting from two success measures and two differentiation strategy measures, the most significant differences occurred for the “product substitutability” indicator, and for the second measure of the firm’s success, i.e., “comparison with competitors”. The results are shown in Table 9 and Figure 1.

### TABLE 9. Results of ANOVA analysis for the second measure of a firm’s success and type of competitive strategy based on product substitutability measures (after removal of 1 outlier)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost leadership</td>
<td>146</td>
<td>3.92</td>
<td>.962</td>
</tr>
<tr>
<td>Stuck-in-the Middle</td>
<td>38</td>
<td>3.87</td>
<td>.777</td>
</tr>
<tr>
<td>Differentiation</td>
<td>59</td>
<td>4.24</td>
<td>.727</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>243</td>
<td>3.99</td>
<td>.891</td>
</tr>
</tbody>
</table>

**Test of Homogeneity of Variances**

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.583</td>
<td>2</td>
<td>240</td>
<td>.559</td>
</tr>
</tbody>
</table>

**ANOVA**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4.792</td>
<td>2</td>
<td>2.396</td>
<td>3.072</td>
<td>.048</td>
</tr>
<tr>
<td>Within Groups</td>
<td>187.191</td>
<td>240</td>
<td>.780</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>191.984</td>
<td>242</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Robust Tests of Equality of Means**

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welch</td>
<td>4.046</td>
<td>2</td>
<td>97.793</td>
<td>.021</td>
</tr>
<tr>
<td>Brown-Forsythe</td>
<td>3.746</td>
<td>2</td>
<td>152.664</td>
<td>.026</td>
</tr>
</tbody>
</table>

a. Asymptotically F distributed.

**Source:** own elaboration.

The “mean” column indicates the average value of answers by three groups (cost leadership, differentiation, and stuck-in-the-middle) to the question concerning the firm's
success compared to competitors. The success-measuring scale ranged from 1 (failure) to 5 (success), the midpoint value (no success, no failure) was 3. Mean values above 3 have been reached for all three categories of companies, but the highest value was observed for firms that apply a differentiation strategy (4.24) and the lowest level was noted for the stuck-in-the-middle group (3.87). The F test, as well as the Welch and Brown-Forsythe tests, indicate that there is at least one significant difference between the three groups of companies (p values of 0.048, 0.021 and 0.026 respectively).

**FIGURE 1.** Means for evaluation of success for companies following three various strategies: cost leadership, stuck-in-the-middle and differentiation (for product substitutability measure)

Figure 1 shows that respondents from companies which applied differentiation strategy for exported products, which are not easily substitutable, perceive themselves to have achieved greater success than the remaining groups.

Concerning H1:
- the difference between the differentiation group and the stuck-in-the-middle group is significant at p = 0.046, according to Fisher’s LSD test;
• the difference between the cost leadership group and the stuck-in-the middle group is not significant: $p = 0.727$, according to Fisher’s LSD test.

The support for H1 is partial because, although firms implementing a differentiation strategy declared greater successes, differences between the cost-leadership group and the stuck-in-the middle group are not significant (we cannot conclude that the cost-leadership strategy is significantly better than the stuck-in-the middle one).

Concerning H2:
• the difference between the differentiation group and the cost leadership group is significant at $p = 0.023$, according to Fisher’s LSD test.

The above result confirms the validity of H2, indicating that companies implementing differentiation strategy perceived their success as being greater than the companies applying the cost leadership strategy.

Regarding the product-similarity measure and the second measure of firm’s success, the differences for the whole sample were significant only at above the 0.2 level. After removing 5 outliers, differences in perceptions of success are significant at below the 0.2 level. Results are shown in Table 10 and Figure 2.

**TABLE 10. Results of ANOVA analysis for the second measure of firms’ success and type of competitive strategy based on product-similarity measures (after removal of 5 outliers)**

“Considering the situation on the (domestic and foreign) markets, where our firm operates, it can be concluded that our company has been successful in comparison to its competitors”.

<table>
<thead>
<tr>
<th>Type of Competitive Strategy</th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost leadership</td>
<td>129</td>
<td>3.98</td>
<td>.918</td>
</tr>
<tr>
<td>Stuck-in-the middle</td>
<td>52</td>
<td>3.94</td>
<td>.725</td>
</tr>
<tr>
<td>Differentiation</td>
<td>60</td>
<td>4.20</td>
<td>.659</td>
</tr>
<tr>
<td>Total</td>
<td>241</td>
<td>4.03</td>
<td>.824</td>
</tr>
</tbody>
</table>

Test of Homogeneity of Variances

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.816</td>
<td>2</td>
<td>238</td>
<td>.165</td>
</tr>
</tbody>
</table>
ANOV A

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2.401</td>
<td>2</td>
<td>1.200</td>
<td>1.781</td>
<td>.171</td>
</tr>
<tr>
<td>Within groups</td>
<td>160.396</td>
<td>238</td>
<td>.674</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>162.797</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Robust Tests of Equality of Means

<table>
<thead>
<tr>
<th></th>
<th>Statistic(^a)</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welch</td>
<td>2.444</td>
<td>2</td>
<td>127.725</td>
<td>.091</td>
</tr>
<tr>
<td>Brown-Forsythe</td>
<td>2.124</td>
<td>2</td>
<td>201.636</td>
<td>.122</td>
</tr>
</tbody>
</table>

\(^a\) Asymptotically F distributed.

Source: own elaboration.

FIGURE 2. Means for evaluation of success for companies following three strategies: cost leadership, stuck-in-the-middle and differentiation (for product similarity measure)

Source: own elaboration.
The results presented in Table 10 and Figure 2 provide some support for both hypotheses.

Concerning H1:
- the difference between the \textit{differentiation} group and the \textit{stuck-in-the-middle} group is significant at $p = 0.099$, according to Fisher’s LSD test;
- the difference between the \textit{cost leadership} group and the \textit{stuck-in-the-middle} group is not significant: $p = 0.755$, according to Fisher’s LSD test.

Concerning H2:
- the difference between the \textit{differentiation} group and the \textit{cost leadership} group is significant at $p = 0.094$, according to Fisher’s LSD test.

Though the significance of differences between extreme groups is close to the 0.1 value of $p$, this result is still worth mentioning because it replicates the previous case with another measure of differentiation strategy. The relatively small sample size, in combination with the heterogeneity of industries and respondents status, makes it difficult to show differences significant at a commonly accepted value of $p$ below 0.05.

As far as an alternative classification of strategies is concerned, – the one based on questions concerning price competition (Tables 4 and 6), – the findings were less successful. Differences between the categories of firms (and the categories of competitive strategies) were not significant even under the relaxed criteria. The $p$ level was above 0.25 in the best case.

The results concerning the relationship between the perceived success of Polish born globals and the type of employed strategy, can be concluded as follows:
- respondents representing the majority of the sample declared that their firms had achieved success;
- the fact that even some \textit{stuck-in-the-middle} companies’ representatives declared success may be the consequence of the fact that the weakest firms went out of business due to 2008 crisis (highly export-dependent born globals were strongly exposed);
- there is some evidence that the results of this research on Polish born globals are similar to the conclusions obtained in research conducted in other countries, i.e., consistent implementation of a given type of strategy is more beneficial than a \textit{stuck-in-the-middle} situation (lack of any clearly-defined strategy).

Marketing strategies implemented by born globals were the subject of many publications worldwide [Gerschewski et al. 2014]. Knight et al. [2004], investigated American and Danish born globals. They found that a primary success factor was firms focusing on selected market segments and appropriate product adaptation. However, the research results published by Knight and Cavusgil [2005] unambiguously pointed to product \textit{differentiation} and concentration as the most significant success factors for this type of firm on international markets. At the same time, they stressed that born globals who compete through low prices are exposed to the weaknesses of this competitive strategy and elimination from the market.
The analysis of answers to the questions and the pairs of statements related to the type of strategy show that, ¼ of firms apply a product *differentiation* strategy (Table 1 and Table 2), and up to 46 per cent use the *cost leadership* strategy (Table 6).

A group of firms that were not able to identify their dominant strategy has also been selected. These are firms with respondents answering “hard to say” (or “moderately” or “in-between”), or stating that they compete through high quality as well as through low price. That is a classic mistake described by Porter [1992] as the strategy of *being stuck in between* strategies.

The analysis of correlation between the *cost leadership* and product *differentiation* strategies suggest inconsistencies in the answers given by the firms’ representatives. Commonly provided declarations on high, or very high quality of exported products should be treated with caution. In future research we intend to distinguish these questionnaire cases, and analyze them separately to check whether these are inconsistencies, or indications of an original form of strategy.

**Summary and Conclusions**

Most research conducted to date on born globals has stressed the necessity of consistent implementation of a competitive strategy. Knight and Aulakh [1998], and Knight and Cavusgil [2005] argued that the dominant strategy of born globals should be market concentration, and a clear offer differentiation.

The analysis of Polish born globals strategies leads to interesting results. One quarter of surveyed firms identified the product *differentiation* strategy as their leading market strategy. Even though 56.6 per cent of respondents signaled that cost savings and the continuous cost reduction were the most important task, only 21.3 per cent confirmed that the price of their basic export product is the lowest on the market. At the same time, 46 per cent of the sample pointed to the low prices as the primary competitive advantage.

An interesting finding is that 93.8 per cent of the respondents declared competing by offering the highest product quality. Though, according to Porter, competition through low prices usually excludes competition through high quality, our analysis results indicate that both forms of competition in the case of Polish born globals were applied. This may suggest that this group of firms is a classic example of what Porter [1992] described as *being stuck* in between strategies.

H1 was partially confirmed: companies implementing a differentiation strategy declared that their market success was higher than the market success declared by companies without a clearly defined strategy (*stuck-in-the middle*); In this respect, no significant differences were noticed between the latter group and companies following cost-leadership strategy.
H2 was confirmed. The differentiation strategy led to higher evaluations of market success than the cost leadership strategy.

The conclusions concerning the relationship between the perceived success of Polish born globals and the type of their strategy are as follows:

- the substantial majority of respondents declared market success;
- the reason why even some stuck-in-the-middle companies declared success, may be the result of the 2008 crisis, during which the weakest firms went out of business;
- the research results reported here are similar to the findings of research conducted in other countries, i.e., consistent implementation of a given type of strategy. The differentiation strategy turned out to be more beneficial than the lack of any clearly-defined strategy.

These empirical findings on the competitive strategies of Polish born globals constitute a good basis for further research in this area. Our considerations, which were based on the Porter's generic strategies, could be followed by an analysis of strategies formulated within a more complex typology framework, such as business models. A potential source of other classification of strategies could be, for example, research on business models [Zott et al., 2011; Gołębiowski et al., 2008].

Notes

1 For a discussion on terminology see Duliniec (2011), and Przybylska (2013).
2 Some authors (Acquaah, Yasai-Ardekani, 2008) challenged Porter's strategies classification and claimed that “mixed” or “hybrid” strategies can be also efficient. Karnani (1984), Hill (1988), Jones and Butler (1988), and Murray (1988) suggested that it was possible, in some circumstances and under certain conditions, to combine generic competitive strategies.
3 According to the market research company, collecting the data, random sampling of enterprises (within two strata: small and medium-size enterprises) made it possible to apply a statistical inference for the obtained results.
4 For the sake of clarity of the presented results and further calculations (correlations), in the case of the integration of answers “definitely the first statement” (number 1) and “rather the first statement” (number 2), a new category “the first statement” has been denoted by number 1.5. In the case of integration of answers “definitely the fourth statement” (number 5) and “rather the fourth statement” (number 4), a new category “the fourth statement” has been denoted by the number 4.5.
5 Compare Knight et al. (2004), Luostarinen and Gabrielsson (2006).
References


Kowalik, I., Baranowska-Prokop, E. (2013), Determinanty powstawania i motywy ekspansji polskich przedsiębiorstw wcześniej umiędzynarodowionych, Gospodarka Narodowa, No. 4, pp. 41–64.


Abstract

The aim of this paper is to evaluate the role of intervening obstacles, understood as legal and policy barriers blocking immigrant access to foreign labor markets, in the international migration process. To do so, we use Polish international temporary emigrants in the years 2000–2012, which spans both the pre-accession period, when Polish citizens were not entitled to access other EU labor markets, as well as the post-accession period, when certain countries gradually removed intervening obstacles according to the transnational agreements.

The findings of this paper undermine the significance of intervening obstacles on Polish migration to EU countries. Instead, the primary driver of Polish migrants was the EU-15 business cycle—and not the opening of EU labor markets.

Keywords: international migration, Polish migrants, legal barriers, labor markets, migration policy

JEL: F220

Introduction

The neoclassical approach to labor migrations posits that labor, being a factor of production, should be subject to profit maximization both internally [Hicks, 1932] and internationally [Todaro, 1969], and that wage differences are directly linked productivity differences between countries. Although the assumptions underlying the neoclassical
approach have been criticized as being unrealistic, the neoclassical approach has signifi-
cantly contributed to explaining the primary cause of the vast majority of contemporary
migrations by clearly linking the migration process with economic indicators, such as
productivity and wage levels.

The significance of intervening obstacles in labor migration theory was first observed
by E. Lee [Lee, 1966], who claimed that the propensity to migrate depends on three main
groups of factors associated with: (1) the area of destination; (b) the area of origin; and (c)
intervening obstacles. Although the significance of these factors was believed to depend
on the characteristics of individual migrants, several of them could also more generally
influence the migration decision. Legal barriers, being an obstacles universally faced in
the contemporary international migration process, are widely thought to be one of the
most important reasons for the low international labor mobility.

International economics theory considers international labor mobility beneficial for
individual migrants, who obtain higher wages [Borjas, 1989], migrant households, which
enjoy risk dispersion [Massey et al. 2011], and for migrants’ home and new host economy.
The latter benefit is rooted in the notion that migrants are part of the excess workforce
from poorer countries, who are used more effectively in growing host economies, which
demand labor inputs to maximize their output. Regardless of the benefits of the migration
process for the global economy, there is typically high social pressure on labor market
protectionism in highly-developed countries, where domestic labor fear displacement,
downward wage pressure, and unemployment from mass immigration.

The political willingness to remove immigration barriers globally is therefore relatively
low. This was also the case with the 2004 European Union enlargement, when the majority
of former EU member states decided against opening their labor markets to citizens of
the A8 countries1 immediately after the 2004 enlargement took place.

In the sections of this paper that follow, we will attempt to empirically verify the impact
of post-accession labor market liberalization on the emigration of the Polish citizens to the
EU152countries. To assess the influence of intervening obstacles on the Polish workforce
emigration rates, that analysis is divided into two periods, with the dividing point being
the date when labor markets for citizens of the A8 countries were liberalized. That analysis
is best characterized as a starting point for further academic discussion and research on
this topic, as the available time series data in this case were too short to permit a more
robust statistical analysis.

**Legal Regulations Concerning Intra-EU Migration**

Free movement of people is one of the core assumptions of the EU internal market
According to Article 45 of The Treaty on the Functioning of the European Union (TFEU), workers in the EU should be able to move freely between its member states for the purpose of employment. Moreover, foreign workers must not be subject to any discriminatory measures regarding employment conditions in any EU member state [Consolidated Version of the Treaty on the Functioning of the European Union art. 45, 2008 O.J.C. 115/47].

This regulation has proven to be one of the most politically sensitive laws, particularly regarding the EU enlargement of 2004, when a large group of relatively poor countries joined the Community. In response to fears of most wealthy European economies, which feared that cheap labor inflow from new member states would lower wages (and ignite social protests), so called “transitional agreements” (also referred to as transnational arrangements or provisions abb. “TA”) were introduced to limit immigration and its impact on the host countries’ labor markets [The Transnational Arrangements For the Free Movement of Workers From The New Member States Following Enlargement of the European Union On 1 May 2004]. The character and scope of these restrictions was decided individually by each EU member state. However, a common structure of transitional arrangements was introduced to impose certain thresholds to those limitations, especially with regard to their overall time limit. The general assumption was that national restrictions on a host country’s labor market would apply for two years after the 2004 accession, which could (after an evaluation by that country) be extended for another three years. A guiding principle was that within five years after the 2004 enlargement, all EU15 countries should have liberalized access to their labor markets for new EU member state citizens, but another two year extension of restrictions was permitted if the host country concluded that it otherwise faced serious disturbances (or a threat thereof) on that country’s labor market.

Hence, the most important limitation on transitional agreements was a seven year maximum time limit, subject to mid-term evaluation periods after the second and the fifth years. Each EU15 member state was also free to decide to remove migration barriers at any time before seven years had passed, without waiting for the relevant evaluation period to end. A second important limit on transnational agreements was their reach was limited to employment matters only, and they were otherwise prohibited from affecting the free movement of people for any other purpose.

In May 2004, only three of the EU15 countries decided against transitional provisions and liberalized access to their labor markets immediately following the accession of the new member states. These countries were United Kingdom, Ireland and Sweden. Other EU15 member states decided to maintain restrictions for at least another two years, which was in line with the regulations included in TA. After this period, i.e., in 2006, barriers were removed by Greece, Spain, Italy, Portugal and Finland. The next three countries to lift the transitional arrangements were the Benelux countries, which decided to do so before the end of the following three-year period: the Netherlands and Luxembourg liberalized their labor markets in 2007, followed by France in 2008 [Holland, 2011]. The only two
European countries that maintained the barriers throughout the entire seven-year period were Austria and Germany, which lifted the barriers in 2011 (see Table 1).

**TABLE 1. Expiration of the transnational arrangements in relation to A8 citizens, in chronological order**

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>2004</td>
</tr>
<tr>
<td>Sweden</td>
<td>2004</td>
</tr>
<tr>
<td>UK</td>
<td>2004</td>
</tr>
<tr>
<td>Greece</td>
<td>2006</td>
</tr>
<tr>
<td>Spain</td>
<td>2006</td>
</tr>
<tr>
<td>Italy</td>
<td>2006</td>
</tr>
<tr>
<td>Finland</td>
<td>2006</td>
</tr>
<tr>
<td>Portugal</td>
<td>2006</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2007</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>2007</td>
</tr>
<tr>
<td>France</td>
<td>2008</td>
</tr>
<tr>
<td>Belgium</td>
<td>2009</td>
</tr>
<tr>
<td>Denmark</td>
<td>2009</td>
</tr>
<tr>
<td>Austria</td>
<td>2011</td>
</tr>
<tr>
<td>Germany</td>
<td>2011</td>
</tr>
</tbody>
</table>

*Source: Holland et al. 2011.*

**Economic Incentives for Migration of Polish Labor**

Our baseline assumption is that the direction of migration is generally determined by differences in national wealth, and that people migrate from their countries of origin (in this case, Poland) to countries where they can earn significantly higher wages. This logical assumption is in line with the vast majority of migration theories. It does not, however, capture situations in which migration results from non-economic factors or occurs between countries of similar wage and productivity levels. The latter case is readily observed in, for example, migration between Germany Austria and Switzerland, or France, Belgium and Switzerland, where lack of language barriers and shared cultural backgrounds lower the “cost” of migration. In such cases, marginal improvements in economic opportunity may be enough to precipitate migration.
Since wage levels in the A8 countries were not significantly different from each other during the examined period\(^3\), we further assume that the destination of migrants from these countries was one of the EU15 member states, which represented an opportunity to significantly improve living conditions.

And, indeed, analysis of macroeconomic indicators at the time of enlargement demonstrates that there were real incentives for A8 country citizens to migrate to EU15 countries. This is perhaps most clearly seen in terms of GDP per capita, whose dynamics seems to be correlated with the migration dynamics [Leven, Szwabe, 2013]. The average GDP per capita in the EU15 was estimated at 26,400 euros in real terms. This was over 2.5 times higher than the corresponding value for the ten countries that joined the European Union in 2004, whose average GDP per capita at that time was 9,320 euros. The corresponding value for the Polish economy was even lower than the GDP average of the new member states; in 2004 it was 6,200 euros, placing Poland as one of the three EU countries with the lowest GDP per capita in real terms, followed only by Lithuania and Latvia. In subsequent years, despite the constant growth of its economy, Poland’s GDP per capita remained lower than the average for the countries of the 2004 enlargement, which did not seem to converge with the EU 15 average (see Figure 1).

**FIGURE 1. Real GDP per capita levels in the European Union in 2004-2012, in EUR**

![Graph showing GDP per capita levels in the European Union](image)

Source: Eurostat.

At the time of accession to the EU Poland’s unemployment rate exceeded 19%. The problem of Polish unemployment was complex, and involved multiple factors related to the ongoing transformation of Poland’s formerly centrally planned economy into a market based one. In general, this transformation resulted in mass lay-offs in inefficient sectors (especially heavy industry). Those lay-offs overlapped with the expiration of protective
periods that had been negotiated by the labor unions in the course of the privatization process, during which the public administration, healthcare and educational sectors were reformed. These processes left many Poles both unemployed and, in effect, unemployable, as they lacked the competences and skills required by foreign companies entering Poland at that time. The resulting mismatch between available labor and desired skills became a structural problem on the Polish labor market, which exhibited a growing demand for highly skilled professionals.

This high unemployment rate also put downward pressure on Polish wages: the average wage in the Polish economy was at that time over five times lower than the average net annual earnings in the EU15 and amounted to 3484.01 euro.

**Polish Migration to United Kingdom, Ireland and Sweden**

Against this backdrop of high domestic unemployment and intra-EU income disparities, it is unsurprising that many Poles migrated within the EU after 2004. The highest immigration dynamics of the three countries that did not impose transnational provisions was observed in the UK, which was ranked highest overall in examined economic characteristics influencing migration. In particular, total GDP in the United Kingdom in 2004 was over 2 trillion USD, as compared to Sweden (362 billion USD) and Ireland (186 billion USD), although GDP per capita levels in Ireland, Sweden, and the United Kingdom were then 37,900 euros, 32,200 euros, and 30,200 euros, respectively.

Regarding unemployment, of these three countries Ireland had the lowest unemployment rate (4.6%), followed by the United Kingdom (5.0%) and Sweden (6.6%). Critically, though, the British economy offered the highest annual net earnings of 23,464 euros, followed by Sweden (22,232 euros). Immigrants to Ireland could expect lower wages, as the annual net earnings level for this country in 2004 was 15,169 euros.

It would be useful to extend this three country analysis to differences in minimum wage levels, insofar as the majority of low-skilled migrants were most likely to receive the lowest remuneration allowed by law, especially in the first months upon arriving in the destination country. However, Sweden (as well as other Scandinavian countries) does not regulate its minimum wage level, which is instead left largely to the process of bilateral sectorial agreements between the employers and the trade unions. Minimum wage levels in Ireland and the United Kingdom at the time of enlargement were almost equal, fluctuating at around 7.00 euros on hourly basis.

Table 2 ranks these three economies (United Kingdom, Sweden and Ireland) according to economic indicators described above.
From Table 2, we see that the United Kingdom was the most economically alluring for the Polish migrants. Britain’s economy was the largest in terms of total GDP and offered the highest wages. Although GDP per capita and the unemployment favored the Irish economy, Ireland enjoyed a significantly lower GDP (almost 12 times) lower than the British economy, which translated into substantially fewer operating companies and, hence, a lower immigrant absorption capacity for the Irish economy.

Besides an absolute advantage in terms of each analyzed economic indicator, the United Kingdom and Ireland also benefitted from a significant linguistic advantage. Since English is widely considered to be the lingua franca of the XXI Century world, two circumstances were created. One circumstance is that since many Polish migrants had been taught English as an obligatory course in Polish primary and secondary schools, that aspect of the cost of assimilation was lower in Britain and Ireland than in Sweden. Another circumstance is aspirational; in a world that relies increasingly on English, working and living in English speaking countries offered greater opportunities to gain proficiency in that language.

This combination of factors suggests that (a) the Polish workforce would be prone to emigrate after Poland joined the European Union in 2004, and (b) its primary destination countries would be the United Kingdom and Ireland. And that migration did, indeed, occur, at levels that exceeded expectations.

In the United Kingdom annual total immigration from new EU member states after the transitional agreements were lifted was anticipated to be between 5,000 and 13,000 by the British Home Office. This low number was not considered problematic, even by migration opponents [Dustmann et al., 2003]. That low number was, however, also inaccurate. As early as 2002 Polish migrant numbers in the United Kingdom, Sweden, and Ireland were estimated at 24,000, 6,000, and 2,000, respectively. By the end of 2004 (after the United Kingdom and Ireland lifted their transnational agreements) the Polish Central Statistical Office [GUS] data estimates that there were as many as 150,000 Polish immigrants in the United Kingdom, 11,000 in Sweden and 15,000 in Ireland, equating to rather impressive dynamics of Polish immigration – being an increase of 650% as compared to the corresponding value in 2002. The number of registered Polish immigrants in the United Kingdom at the end of the accession year therefore exceeded all previous
predictions, even though it is claimed that not all of them legalized their stay (so called ‘semi-legal migrants’) [Kubal, 2009], and that a large percentage of registered immigrants had already been present in the United Kingdom and simply took the opportunity to legalize their stay [Portes, French, 2003]. The scale of immigration growth is nevertheless unprecedented, and sustained. The dynamic inflow of the Polish citizens was not limited to one year. Rather, Polish migration to grew at a relatively high pace from 2004–2007 (i.e., until the recession of 2008), with the average yearly dynamics of 185% in the case of the United Kingdom and 295.5% in the case of Ireland. The Polish average yearly migration dynamics to Sweden in the described period was far lower and amounted to 48.3% (see Figure 2), although it should be noted that in 2002 the number of Poles in Sweden was three times higher than in Ireland and amounted to 6,000.

Calendar year 2003 is omitted from this calculation due to a lack of reliable GUS data for that year. Although 2003 data can be retrieved from the local statistical offices (e.g., the LFS in the United Kingdom), these local data do not always correspond with the Polish data set. Reliance is placed on the GUS dataset because it avoids the under-reporting that often characterizes foreign host statistics since many Polish citizens refuse to register in the host country, even if such registration is obligatory.

**FIGURE 2.** The post-accession Polish migration dynamics to Ireland, Sweden and the UK

The low dynamics of emigration to Sweden can be explained by several factors. First and foremost, as it was shown in Table 2, Sweden was not ranked as number one in terms of any of the analyzed economic indicators. The Irish economy had the highest real GDP growth rate (4.4% in 2004) and the British economy was ranked among the largest economies in the world. Moreover, such non-economic factors as the language
barrier likely played a role in discouraging Polish emigration to Sweden. The two facets of this issue (easier communication for those who know rudimentary English, and the opportunity to improve English language skills) have already been mentioned. It has also been observed that despite Sweden’s low unemployment rate there, are few job vacancies for newcomers to the Swedish labor market. [Wadensjö, 2007].

Relatively high Polish migration to the United Kingdom and Ireland after 2004 is also consistent with the migrant networks and migration systems theories, which claim that an existing social network of migrants in the destination country and potential migrants in the country of origin is decisive to migration flows. The interconnections between those who already emigrated and those who are considering doing so are crucial for migration flows, as current immigrants provide potential migrants with precise information about living conditions, work opportunities and the local labor market in their place of residence. If current immigrants positively report their improved living conditions, others are encouraged to move to certain locations, the migration process gains momentum, and it becomes self-perpetuating independent of the factors that originally triggered it.

Such was the case with the Polish migration to the United Kingdom and Ireland in 2004. Migrating Poles were able to readily maintain frequent contacts with their social network (without incurring significant costs due to ICT development), and many of their network members decided to migrate as well. After emigrating and settling in the destination country they, in turn, became the information source for more potential Polish migrants. This migrant network effect is crucial to explaining large scale Polish migration inflows to the United Kingdom and Ireland in the post-accession period [Sumption, 2009]. In 2009, 26% of Polish migrants surveyed stated that they found employment in 2004 through contacting other Poles working in the United Kingdom. This proportion grew to 36% in 2007. Why migrant networks were less efficient in Sweden may be because the main wave of immigration to Sweden was between the 1945 and 1970 [Wadensjö, 2007]. This suggests that the Polish diaspora in Sweden did not manage to establish relations with young Poles (those who migrated during the post-enlargement period).

However, the 2008 recession provides strong evidence that the destination country business cycle, understood as fluctuations in the year to year GDP growth, is also an important determinant of intra-European migration flows. When the United Kingdom and Ireland were hit by the recession, many Polish migrants decided to return to their country of origin. The positive ratio of Polish migration to the United Kingdom was again observed when the GDP growth path of the destination countries returned to being positive. This sudden outflow of Polish immigrants during the crisis freed the British and the Irish economies from an excess workforce without generating budget costs for these countries’ governments (i.e., unemployment benefits, social benefits). This outcome therefore (surprisingly) proves beneficial for the host immigration country’s labor market, supporting labor market liberalization. If the Polish immigrants had been illegal in the immigration countries (in this case the United Kingdom and Ireland), they would be unlikely to return
to Poland after losing their jobs, for fear it would be impossible for them to return [Leven, Szwabe, 2013]. In the analyzed case, numerous migrants decided to return to Poland during the 2008-2009 crisis (according to GUS data, the number of Polish immigrants in the UK shrunk from 690,000 in 2007 to 595,000 in 2009 and in Ireland from 200,000 to 140,000)13, waiting for the British and the Irish economies to recover. After this recovery (i.e., when the United Kingdom and Ireland returned to positive annual GDP growth), migration data reveals increased Polish immigrants numbers, indicating that the Polish workforce gradually began to return to those countries.

Notably, migration flows were more related to the economic growth of the destination country than the country of origin, as proved by Polish migration to the UK, where the analysis of the dependence between annual growth rate of Polish migration to the UK and the annual growth rate of the difference between the British and the Polish GDP between 2004 and 2010 was conducted. The Pearson correlation coefficient reached the value of 0.667, which can be interpreted as relatively strong dependence. This means that changes in differences in the economic growth between the United Kingdom and Poland were linked to the annual growth rate of Polish migrants to the UK. However, it bears mention that the time series date used for the statistical dependence analysis was not long enough to permit firm, definite conclusions to be reached [Szwabe, 2012].

**Economic Growth vs. the Intervening Obstacles in the Migration Process**

The 2004 removal of intervening obstacles and transnational arrangements in the United Kingdom, Ireland, and Sweden undoubtedly played a role in the mass migration of Poles to those three countries. However, an analysis of the migration dynamics to countries that subsequently liberalized their labor markets undermines the centrality of intervening obstacles as an explanation of the intra-EU migration process and patterns. The average year to year emigration dynamics to all the EU15 countries after each lifting their transitional arrangements is estimated at 25%. This number includes the very high immigration dynamics of the United Kingdom and Ireland (respectively 91% and 142.8%). Even more interesting is that the Polish emigration dynamics average to the EU15 countries before each of them liberalized their labor markets was surprisingly higher, reaching 32.8% (see Table 3).
There are several possible explanations for these dynamics. A likely one is that emigration rates are strongly correlated with the destination country business cycle [Szwabe, 2012]. The economic crisis of 2008 caused EU15 immigration rates to fall, regardless of the fact of their phase of labor market liberalization. Table 4 shows how the average Polish emigration rates to the EU15 countries gradually diminished and finally slumped in 2008, reaching negative values due to the economic recession. It is worth mentioning that Poland was the only EU country managing to sustain positive GDP growth numbers throughout the recession, which lends further support to the notion that the business cycle of the emigration country is less important for the migration process then the business cycle of the destination country.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>av. Δ after lifting the TA</th>
<th>av. Δ before lifting the TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>–17,2</td>
<td>18,1</td>
</tr>
<tr>
<td>Belgium</td>
<td>13,3</td>
<td>21,0</td>
</tr>
<tr>
<td>France</td>
<td>3,1</td>
<td>28,3</td>
</tr>
<tr>
<td>Greece</td>
<td>0,6</td>
<td>25,9</td>
</tr>
<tr>
<td>Spain</td>
<td>9,4</td>
<td>55,0</td>
</tr>
<tr>
<td>Ireland</td>
<td>142,8</td>
<td>n/a</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14,6</td>
<td>81,6</td>
</tr>
<tr>
<td>Germany</td>
<td>–0,7</td>
<td>6,5</td>
</tr>
<tr>
<td>Sweden</td>
<td>27,1</td>
<td>n/a</td>
</tr>
<tr>
<td>UK</td>
<td>91,0</td>
<td>n/a</td>
</tr>
<tr>
<td>Italy</td>
<td>5,3</td>
<td>46,6</td>
</tr>
<tr>
<td>Finland</td>
<td>50,6</td>
<td>36,3</td>
</tr>
<tr>
<td>Portugal</td>
<td>11,1</td>
<td>29,1</td>
</tr>
<tr>
<td>Denmark</td>
<td>–1,7</td>
<td>11,8</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>25,0</td>
<td>32,8</td>
</tr>
</tbody>
</table>

Source: GUS.
TABLE 4. Polish average emigration rates after the 2004 EU enlargement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>av. emigration $\Delta$</td>
<td>135.3</td>
<td>80.6</td>
<td>57.1</td>
<td>25.8</td>
<td>2.1</td>
<td>$-5.5$</td>
<td>$-3.1$</td>
<td>$-3.0$</td>
</tr>
</tbody>
</table>


Another interesting observation is that most EU15 countries experienced high numbers of Polish immigrant inflows in the period immediately following labor market liberalization. This may indicate that the statistics include migrants already living in the host migration countries at transnational arrangements were lifted, and legalized their status when given a chance to do so [Ports, French, 2005].

Conclusions

The role of legal barriers in migration process is indisputable. This can clearly be seen in Polish migration to the UK and Ireland, where open labor markets caused large scale immigration. However, the above analysis suggests at least two other factors are highly relevant to migration volumes and directions. The first is the language spoken in the destination country. Since most Europeans have had at least some experience with English, countries in which English is the official language offer an advantage to migrants of lower assimilation costs, while providing them with a ready opportunity to improve those language skills in a global economy, in which proficiency in that language is widely viewed as facilitating professional careers.

The second factor – considered to be the key finding of this paper – is that the business cycle of the destination country seems to be of decisive importance to migration inflows. More specifically, regardless of differences in the nominal values of wage levels or GDP per capita between the country of origin and the country of destination, emigration rates of Polish citizens were strongly associated with EU15 business cycles. When these countries were hit by recession Polish emigration dynamics slowed, and often reached negative values. That is, during host country recession, more Poles were returning to their home country than leaving it. On the other hand, it must be noted that due to historical processes many Polish citizens, especially those living in the Southern and Western Poland, are dual citizens (e.g., Polish and German) and, for that reason, were entitled to work in the EU15 countries long before the transnational arrangements were lifted.

In conclusion, although legal barriers must be incorporated into any migration process analysis, their removal is not alone sufficient for migration to take place. As this study shows, the examined data supports the relationship between high immigration rates and
workforce demand from local businesses in the host country, resulting from that country’s overall economic prosperity and GDP growth rates.

Notes

1 A8 countries are countries which joined the EU in 2004, except for Cyprus and Malta, i.e., the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.
2 EU-15 countries are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.
3 Source: European Industrial Relations Observatory (EIRO)
4 Source: Eurostat
5 Source: World Bank
6 Source: Eurostat
7 Source: Eurostat
8 Source: Eurostat
9 Source: European Industrial Relations Observatory
11 As no reliable GUS data are available for 2003, the above calculations omit this year and compare the number of immigrants of 2004 with this of 2002, when the Polish Census survey was conducted. This is the case with the UK, Ireland and Sweden.
12 Source: Eurostat

References


*The Transitional Arrangements For the Free Movement of Workers From The New Member States Following Enlargement of the European Union On 1 May 2004.*
