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Importance of Intellectual Capital in Enterprise Growth, with Special Emphasis on the Textile and Clothing Industry in Poland

Abstract

This article is an attempt to depict the status of intellectual capital management among textile and clothing manufacturers in Poland. Its first part deals with theoretical issues, explains the notion and nature of intellectual capital, introduces its components, and points to the significance of intangible assets in modern business management. In summing up this part, the author presents the textile and clothing industry as being representative of sectors where intellectual capital should play a central role in firm management. The second part of the article presents the results of the survey that the author conducted in March 2011 based on a representative sample of manufacturers operating in the textile market in Poland. The survey aimed to determine and evaluate the occurrence and management of intellectual capital among the respondents. Its questionnaire dealt with human and structural capital, thus providing a reliable picture of how intangible assets are used in this industry. Based on the survey results the author drew conclusions that aided the formulation of guidelines for improving the competitiveness of Polish textile and clothing manufacturers.

Key words: intellectual capital, textile and clothing industry.

■ Introduction

Intellectual capital is among the key issues in contemporary socio-economic development. Its importance derives mainly from the special nature of today's business environment. Changing dynamically, it drives the evolution of opinions on the major factors underlying market success. Enterprises must seek new ways of competition to mark their presence in the market and remain in business. In order to achieve this, unique competencies and skills are needed. Advancing globalisation frequently causes that products placed on the market are homogenous notwithstanding their being made by different manufacturers and that enterprises use similar marketing practices to attract customers. As a result, they become ineffective and are unable to fully recognise or stimulate consumer needs, which substantially restricts their development potential.

Therefore, innovative solutions, other than those traditionally treated as such, are becoming increasingly important. Until recently innovation has been usually associated with coming up with a new product, technological process, production method, or with the application of a new way of selling or promoting a product. However, an enterprise wishing to have "something" that will make it different from its competitors must implement a new approach to its business. A modern business model is necessary, founded mainly on so-called „innovation management". Unlike other types of innovation, this one has a unique potential

for creating a system which is not easy to imitate, thus allowing permanent and considerable competitive advantage to be achieved [1]. However, the system will not function unless the intangible assets are competently managed, otherwise the enterprise's concentration on its real assets, i.e. related to financial capital, will become insufficient, limiting the scope of its business and preventing full utilisation of the assets. Modern management processes must use and manage knowledge, not only with respect to the functioning of individuals but also to the development of the entire business policy system [2]. Knowledge-based management where employees' skills and experience are treated as the organisation's key asset should become a paradigm for entrepreneurs. Reference to the theories developed by the most prominent management expert, Professor Peter Drucker, is very relevant at this point, according to whom the productive use of knowledge is at the core of modern management [3]. Because management concerns humans rather than techniques or processes, enterprises need to modify their entire philosophy of action and to lay stress on the implementation of intellectual capital strategies.

Figure 1 below shows asset categories that every enterprise has. Because the priority today is given to the building of a 'knowledge-based economy', it must be assumed that intangible assets have a higher value for an organisation and that they bring measureable benefits, when managed competently.

The notion and nature of intellectual capital

The literature offers many definitions of intellectual capital, thus it is difficult to choose the one that is recognised by everyone and explains the subject explicitly. Naturally, because of limited space in this article and its aims, a thorough presentation and analysis of all available definitions is not possible. A more important thing is to select those that characterise the phenomenon transparently and comprehensively.

For instance, according to the International Federation of Accountants (1997), intellectual capital is the total stock of capital or knowledge-based equity that the company possesses. It includes employees' knowledge and expertise, customer information and relationships, brands, contracts, information systems, administrative procedures, patents, trademarks and the effectiveness of processes [4]. A very popular definition of intellectual capital that contributed to its development, particularly in the USA, was formulated by Thomas A. Stewart, who described intellectual capital as a means that should be used to increase the value of an enterprise's assets [5].

Another definition frequently quoted in literature was put forward by G. Urbanek, who describes intellectual capital in his publications as an enterprise's intangible resource that yields tangible results. Intellectual capital includes both pure knowledge as well as the results of its transformation into intangible assets [6].

The best known definition of intellectual capital comes from the research conducted at the Skandia Company (Skandia is a Swedish company in the financial services sector. This is the first firm in the world to have an intellectual capital department, which was established by L. Edvinsson). Its author, L. Edvinsson, divides intellectual capital into two components, i.e. human capital and structural capital [7]:

$$\text{Intellectual capital} = \text{human capital} + \text{structural capital}$$

Intellectual capital derives its value from the interplay between these two components. If any of them is omitted, then the benefits of intellectual capital will not be realised. On the other hand, their bal-

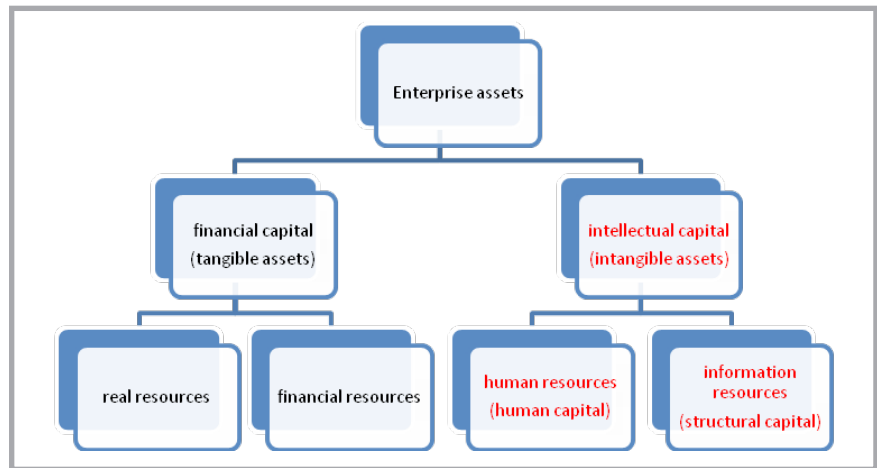


Figure 1. Enterprise assets; **Source:** developed by the author based on L. Edvinsson, M. S. Malone, *Kapitał intelektualny*, Ed. PWN, Warszawa 2001.

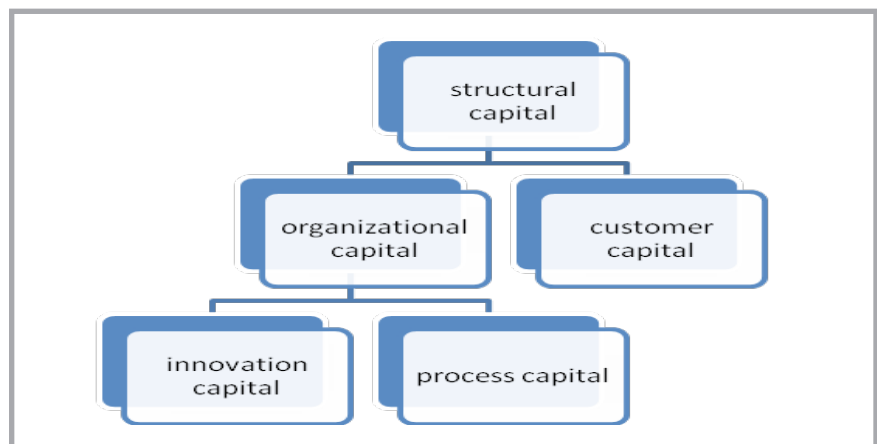


Figure 2. Elements of structural capital. **Source:** L. Edvinsson, M. S. Malone, *Kapitał intelektualny*, Ed. PWN, Warszawa 2001.

anced use ensures synergy in generating enterprise value [8].

Human capital consists of employees' knowledge, skills, ingenuity and capabilities. These factors are not controlled by the enterprise – they are privately owned by its employees who lend it to help their enterprise grow. Therefore the key factors raising an enterprise's effectiveness in a knowledge-based economy are investment in employees as well as appropriate motivation and remuneration. Human capital includes also organisational culture and corporate philosophy.

By contrast, structural capital is the property of the enterprise and, according to L. Edvinsson and M. Malone, its structure is more complex. It is presented in **Figure 2**.

The above diagram divides structural capital into organisational capital and customer capital. Structural capital is

knowledge acquired by the enterprise i.e. the elements of its internal structure. These can be various management methods, the organisational culture, corporate traditions, databases, intellectual property (patents, industrial designs, utility designs, trademarks, etc.), the potential for innovation, the ability to learn, and many others, all representing an enterprise's intangible assets. Customer capital includes the links that the enterprise has established with its environment, i.e. its skill of forming relationships with customers, suppliers, other business partners, as well as its image and how it is perceived in the market.

The description of intellectual capital can be made even more specific by breaking down organisational capital into innovation capital and process capital. The latter category includes procedures, techniques and worker programmes having an effect on an enterprise's effectiveness. This is a sort of practical knowledge which is ap-

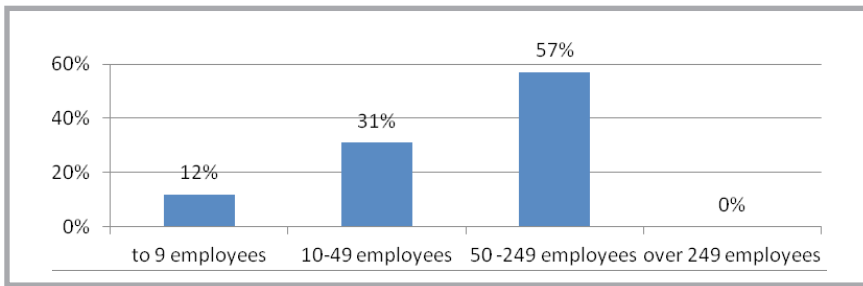


Figure 3. Responding clothing manufacturers by employment size; **Source:** developed by the author based on the results of field research in firms.

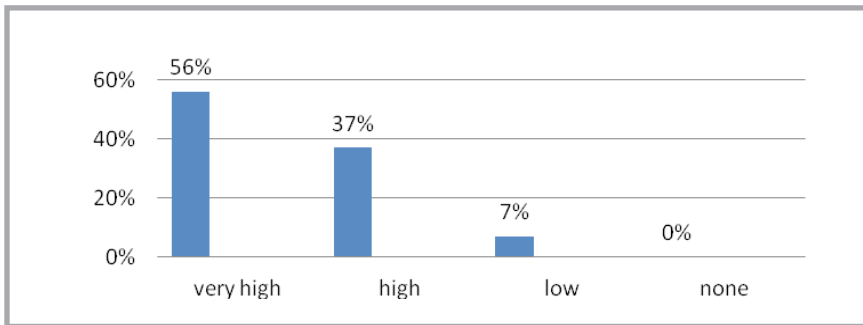


Figure 4. The importance of innovation in the textile and clothing industry. **Source:** developed by the author based on the results of field research in firms.

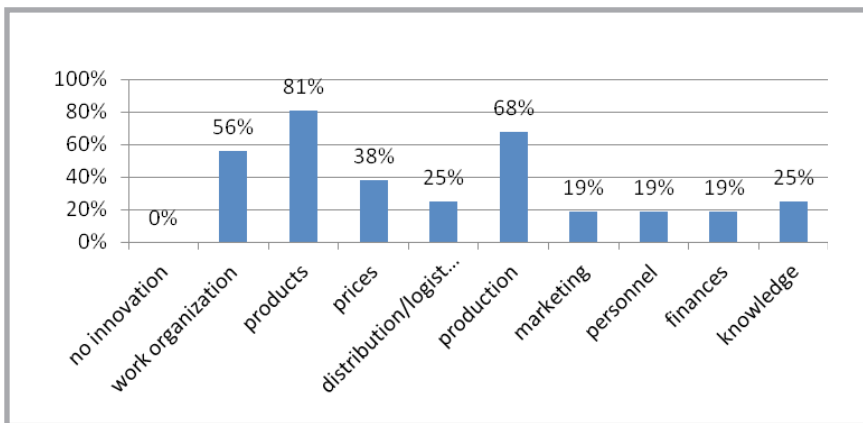


Figure 5. Types of innovation in the textile and clothing industry; **Source:** developed by the author based on the results of field research in firms.

plied on an on-going basis to create customer value.

Innovation capital is represented by the skills and capabilities that an enterprise needs to create new products and services and to place them promptly on the market. This capital combines two traditional intangible assets: intellectual property (copyrights and industrial property rights) and other immeasurable assets, such as the theory underpinning the functioning of the enterprise.

It is deemed that enterprise management follows an intellectual capital strategy, if all components of intellectual capital are integrated and joined together. Only then

can the desirable effects, such as a high competitive position, be expected to appear [5].

Because the above issues are becoming the mainstay of management processes today, a decision was made to survey Polish textile and clothing manufacturers in order to analyse and evaluate the occurrence and management of intellectual capital. The examination of the results was expected to provide valuable information about these enterprises, given that intellectual capital is gaining importance as a factor in enterprise management, being a determinant of their competitiveness.

Intellectual capital and the textile and clothing sector – the results of the survey

Awareness of the significance of intellectual capital is spreading among modern enterprises; this concept is a primary signpost for their management, frequently determining an enterprise's position in the market [9]. The *textile sector* should certainly not be the one where it is absent.

The European textile and clothing industry is a leader in the field of innovation and creativity and in setting trends. Despite strong competition in the world markets and the tendency towards relocating manufacturing processes to low-labour cost countries, this industry continues to represent one of the most important sectors in Europe, with an annual turnover exceeding 210 bn € and a total workforce of 2.3 million. Europe is a key player in the world trade, ranked first for the export of textiles and third for the production of clothing [10].

In the increasingly competitive and dynamically changing market for textiles and clothing, the success of enterprises, particularly those in the SME sector, will depend on various innovative solutions, both technical and non-technical. Therefore entrepreneurs thinking about becoming market leaders should incorporate intellectual capital strategies into their business strategies and give them priority in all actions they take.

An attempt at evaluating the situation in this field was made by surveying the manufacturers in this sector.

A sample was assembled from a database available through the website 'Polskie Firmy' [11], owned by Makromedia Sp. z o.o., which is one of the major and most experienced organisations offering business information.

In the survey, questionnaires with cover letters were mailed to 180 producers of textiles and clothing. Sixty four questionnaires were returned, which accounts for 35.5% of the total sample. The return rate is comparatively high for this data collecting method, hence the survey results can be rationally expected to be fully reliable [12]. A preliminary analysis of the data showed that all enterprises surveyed were SMEs. Most manufacturers employed from 50 to 249 workers, thus fall-

ing under the category of medium-sized organisations (*Figure 3*).

Regarding their markets of operation, as many as half of the manufacturers also did business abroad. This result shows that the firms tend to internationalise their operations, thus making an intellectual capital strategy a part of their management process becomes a must.

The first part of the survey analysed and evaluated innovative solutions representing an inseparable component of intellectual capital that were used by the respondents.

Innovation policy gives enterprises a chance to grow and attain competitive advantage. The survey results show that most respondents were aware of that because they indicated that innovation was very important in their organisations (*Figure 4*). Additionally a correlation was found between these opinions and their presence in the global markets – almost 80% of the respondents that gave this answer were active outside Poland.

However, almost 40 % of the respondents did not think innovation was crucial; in their opinions it was very important in their organisations, but not decisive. Every tenth manufacturer did not view innovation as a growth-driving factor.

To learn more about this subject, data were collected on the areas where the firms surveyed had innovated in the years preceding the survey. The results showed that most innovations implemented were traditional with respect to products (81%) and production (68%) - *Figure 5* (the respondents were allowed to give more than one answer, so the numbers do not add up to 100%).

Many respondents answered that they had introduced work organisation innovations (56%). This trend is favourable because these improvements must accompany the implementation of intellectual capital strategies. Because the limited scope of the survey precludes the drawing of explicit conclusions about the nature of the changes, this subject area should be investigated more specifically during the next stage of the research. Unfortunately two major areas of innovation whose existence proves that an intellectual capital strategy is being implemented were quite insignificant for the respondents. In the last three years preceding the

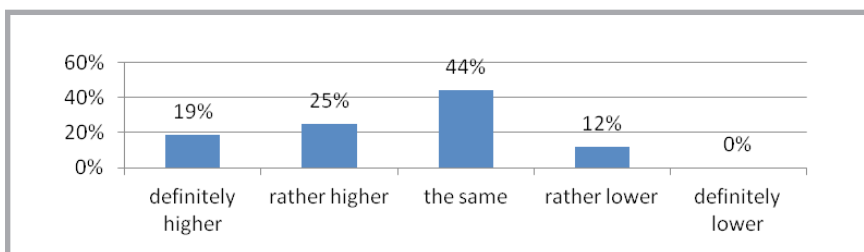


Figure 6. The respondent's level of innovation against its competitors; Source: developed by the author based on the results of field research in firms.

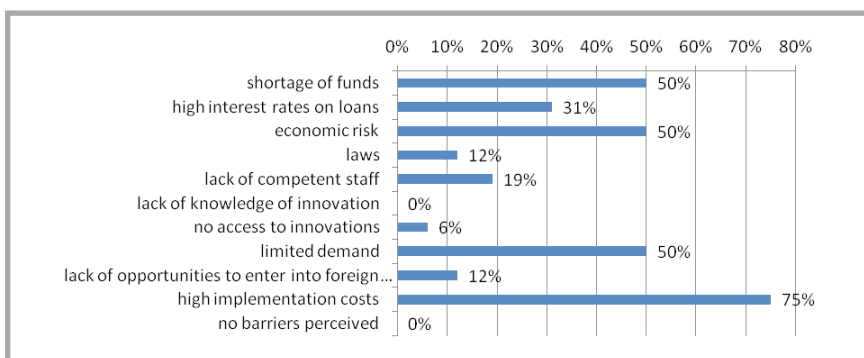


Figure 7. Barriers impeding innovation in the textile and clothing industry; Source: developed by the author based on the results of field research in firms.

Table 1. Internal and external barriers to innovation in the textile and clothing industry [17]; Source: developed by the author based on the results of field research in firms.

Internal barriers	% of indication	External barriers	% of indication
shortage of funds	50%	high interest rates on loans	31%
high implementation funds	75%	economic risk	50%
lack of knowledge of innovation	0%	laws	12%
lack of competent staff	19%	no access to innovations	6%
		limited demand	50%
		lack of opportunities to enter into foreign markets	12%

survey only one in four respondents had introduced knowledge-related innovations and one in five in the HRM area. This is certainly not enough to be able to state that the textile and clothing manufacturers make good use of intellectual capital to raise their competitiveness.

This situation had an effect on how they evaluated the levels of innovation in their organisations. For almost half of the respondents (44%) their own and their competitors' levels of innovation were relatively similar. One in five manufacturers claimed not to have a competitive advantage. Mostly enterprises operating worldwide operations claimed to have an innovative advantage over their rivals, but a correlation between this opinion and enterprise size was not found. Those who definitely believed that they had a market advantage accounted for only 19%, and

those having doubts about their dominating position constituted 25% (*Figure 6*).

These results and the knowledge that the textile and clothing industry in Poland represents a low level of innovation [13] made it necessary to enquire about barriers limiting the propensity of enterprises to innovate. Unfortunately they were encountered by all respondents (*Figure 7*).

To learn more about factors constraining manufacturers willing to introduce innovations, they were divided into those emerging in-house and those coming from outside. As a result, the following table was compiled:

According to the *Table 1*, the main internal barrier is the shortage of funds (50%), which makes entrepreneurs believe that the implementation costs of innovation are very high (as much as 75% of

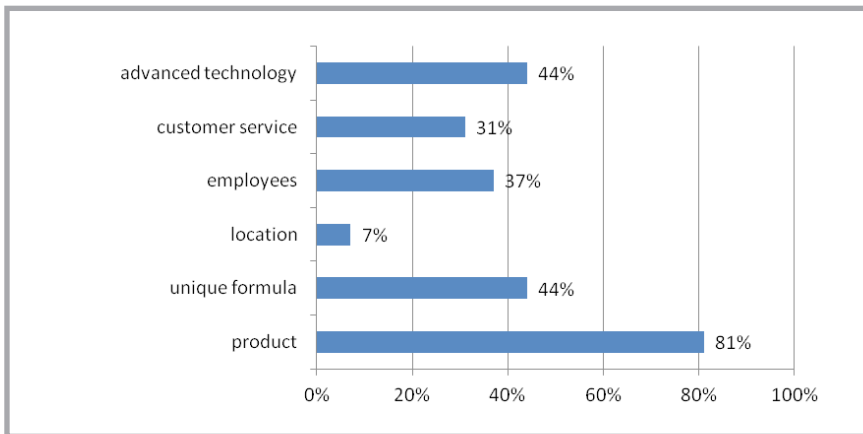


Figure 8. Strong points of the textile and clothing manufacturers; **Source:** developed by the author based on the results of field research in firms.

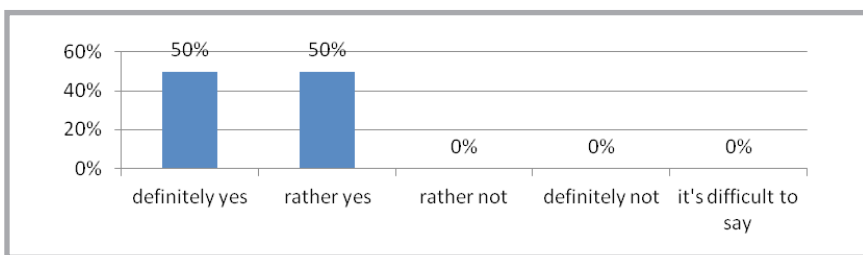


Figure 9. Knowledge as the main source of competitive advantage; **Source:** developed by the author based on the results of field research in firms.

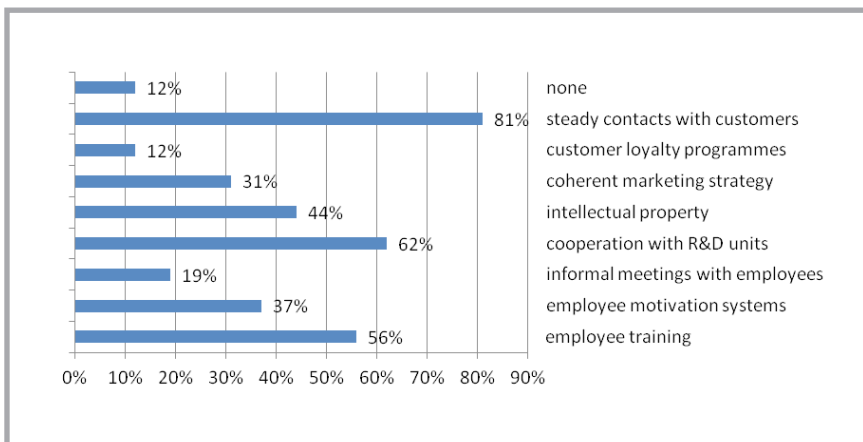


Figure 10. Measures concerning intellectual capital among the textile and clothing manufacturers; **Source:** developed by the author based on the results of field research in firms.

them stated so). The external barriers are mostly economic in nature. Their causes may be sought in the economic crisis that erupted in recent years and still haunts enterprises (market risk, limited demand, high interest rates on loans).

The second part of the survey aimed to identify the major strong points of the respondents. A firm's knowledge of its key competencies should chart its road to market success. The respondents answering the question "what makes your organisation different from others..." usually pointed to their product (81%),

advanced technology (44%) and a unique formula (44%) - **Figure 8**.

The above data show that the essential component of human capital – employees – is not viewed as an important factor that might differentiate a manufacturer from its competitors. Unlike the well-boding perception of a 'unique formula', which certainly is a component of structural capital, customer capital is ranked low.

This is puzzling considering that all manufacturers believe that knowledge will be the main source of competitive advantage

in the future. This opinion was definitely supported by 50% of the respondents and rather supported by the rest (**Figure 9**). Considering that business will have to be done in the environment of a knowledge-based economy, the results seem very promising.

A very important question that the respondents were asked aimed to identify the main components of intellectual capital that they used in their enterprises. Eight major areas that a modern enterprise should prioritise were distinguished using literature on the subject.

An enterprise that uses an intellectual capital strategy to build its competitive advantage should be active in all the areas. Yet only 12% of the respondents marked all answers, 6 % most of them, and 31% half of them. Almost 50% of the respondents implemented from one to three components of intellectual capital, and 12% used none. These results point to a very limited awareness of intellectual capital in the textile and clothing industry.

Most respondents marked the presence of such intellectual capital components as steady contact with customers (81%), cooperation with R&D units (62%), and employee training (56%) - **Figure 10**.

Worrying is the low percentage of firms that treat intellectual property as their major intangible asset (only 44%). Intellectual property, for instance protected industrial designs and trademarks, plays a special role in creating, selling and promoting textiles and clothing. In the fashion market success comes with ingenuity and creativity as well as with the quality and aesthetics of goods. As the clothing sector invests huge amounts each season to create new, distinctive products and to promote brands [14], they must be appropriately protected if their owners are to become more innovative and competitive. Intellectual property also includes patents that may become a source of market success for innovative textile manufacturers. Research conducted in 2010 into the use of intellectual property in the textile and clothing industry revealed that entrepreneurs undervalued this area [15]. Unfortunately the findings of the study herein confirm that nothing has changed since then.

Conclusions and recommendations

It is rather obvious that the intellectual capital issues raised in this article and the survey results presented herein are not likely to cover the whole subject area. However, notwithstanding the shortage of studies dealing with intellectual capital, particularly in the textile and clothing sector, this survey has managed to provide an outline of how intellectual capital is used by Polish manufacturers in this sector.

Based on the outline, several significant conclusions can be drawn:

Firstly manufacturers' attention should be brought to the fact that they should give priority to the development of strategies taking account of intellectual capital. This approach will allow them to improve their growth prospects.

Secondly, it should be stressed that intellectual capital management directly raises the level of innovation in firms, particularly in the industry in question. It is through the property of intangible assets that a firm displays its innovative character, strongly based on intellectual capital.

Because the textile and clothing industry is becoming a very innovative sector where new textile technologies and products of various use are targeted by dishonest 'pseudo-entrepreneurs', the risk from unfair competitors is particularly high. It is also an industry where the road to success starts with attractive, original designs, and where customers' attachment to a brand plays a significant role [16]. This means that the elements of industrial property, such as industrial and utility designs, trademarks and patents should be treated as key assets and ought to be used to generate measurable profits. These assets are important for creating, selling and promoting textile products. In this market, ingenuity, creativity, quality and aesthetics are the main factors behind market success. Each textile and clothing manufacturer should adequately protect its designs, trademarks and innovative solutions against copying, counterfeiting and use by competitors. Innovative enterprises are those that not only implement new products or processes but also innovate in other business areas.

The survey results suggest that entrepreneurs have a high awareness of the

significance of innovation; the number of manufacturers that has started to innovate is also satisfactory. However, their efforts are mainly concentrated on traditional areas. As a result, their innovation is at a critical level, and they mostly unable to determine where their competitive advantages are. Enterprises introducing innovations encounter many barriers, mainly the shortage of funding.

Thirdly the results clearly state that the responding enterprises do not use intellectual capital strategies to design their activities. Even though the respondents believe that knowledge will be the main source of competitive advantage in the future, they can neither use it effectively nor appreciate employees' skills as they deserve. None of the manufacturers surveyed could utilise intellectual capital to the full extent, which means that they were unable to see the "potential of the intangible" as a source of market success.

The research presented should be continued by extending its scope and enlarging the sample. It would be particularly useful to divide the sector investigated into industrial and consumer subsectors and to conduct independent research addressing the major elements of intellectual capital corresponding to the subsector. It is worth noting that intangible assets significant for the B2B firms and those having a strong effect on the competitive advantage of the B2C firms may be significantly different, thus exploration of this subject area is fully justified.

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