INTENSITY OF RIVALRY IN CZECH FURNITURE PRODUCTION INDUSTRY

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Abstract

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The paper focuses on furniture production industry in the Czech Republic and evaluates the influence of competition forces within this industry. These forces have a direct impact on success of competitive strategies of the firms. Furniture production industry is a typical branch occupied by numerous small and medium-sized firms. Small firms aim on satisfying domestic (or rather local) demand, medium-sized and big firms are much more aiming on exports. The methodical sources for evaluation of rivalry represent particular influences defined by Porter in his model of five competitive forces. Main influences identified by Porter, which are increasing the intensity of competition in the furniture production industry in the Czech Republic include low industry concentration, relatively low diversity of competitors, decline in sales, low (or none) switching costs, and existing excessive capacity within the industry. Further development will be most significantly influenced by a growing concentration of the bigger Czech producers on domestic market and overall economic development.

Porter's model, furniture production industry, industry concentration, intensity of rivalry, diversity of competitors

Competition among the firms within an industry is one of the major determinants of attractiveness of the industry, and the level of profitability of particular competitors. The intensity of competition between the established firms is mostly influenced by the level of concentration (number and size of firms competing within an industry), diversity of competitors, market size and growth rate, level of capacity utilization, exit barriers, economies of scale and the ratio of fixed to variable costs. If the rivalry is high, firms spend much of the profits on competing. Firms can compete in a number of ways, for example price (including price wars), marketing and advertising, investment and product development.

This paper focuses on identification and analysis of the factors of competition within the Czech furniture industry. Objective of this paper is to look more closely at the particular factors based on Porter's (1994) approach, and identify their current influence in the furniture production industry. Based on this analysis, key recommendations connected with the level of rivalry of existing competitors will be formulated.

MATERIALS AND METHODS

Before analyzing and industry it is necessary to define the relevant industry and its borders. Furniture production industry in this paper is considered the industry of furniture produces as they are defined by the national industry-classification CZ-NACE (Classification of economic activities). This industry thus covers the production of wooden or metal furniture, and furniture produced of synthetic and related materials for any field of utilization. According to the classification it includes production of office furniture and retail outlets equipment, kitchen furniture, bedroom and living-room furniture, garden furniture, but also production of mattresses.

In order to be consistent in evaluating the situation, current prices are used throughout the paper, when describing industry size and growth, size and market shares of competitors, their production volumes, and sales.

Methodology of the paper is based on the model of five competitive forces defined by Porter

(1994). Paper focuses specifically on one of these forces – rivalry among existing competitors, and identification of key factors influencing the intensity of rivalry of established firms.

Rivalry among existing competitors can take many forms like price discounts, introduction of a new product, advertising campaigns, service improvements etc. Rivalry limits the profitability of an industry. The extent to which rivalry limits the industry profits depends on the intensity with which the companies compete. Intensity of rivalry is mainly a result of the industry concentration, diversity of competitors, industry growth, fixed cost, size of capacity augmentation, exit barriers, and strategic intents of the competitors (Porter, 2008).

In the conclusion, results of the industry analysis will be summarized into a table, where particular factors will be evaluated in a verbal form.

RESULTS AND DISCUSSION

In terms of number of companies, the furniture industry is dominated by micro enterprises, but there are also some large manufacturers (2 businesses have more than 500 workers, 4 businesses have from 250 to 499 workers). Main manufactured products are wooden furniture, synthetic, and metal furniture for bedrooms, dining rooms, living rooms. Other important products are kitchen furniture as well as seats and office furniture.

Industry concentration

In terms of number of companies, there prevail small producers with up to 10 employees (they represent more than 90% of producers). To the end of 2010 there were registered 17488 businesses operating in furniture production, in the Czech Republic. Number of businesses in the particular

size-categories is shown in Tab. I. Czech statistical office, though, estimates, that only about 35% of these businesses are actually active.

The biggest furniture producers in the Czech Republic include JITONA (production programme focuses on furniture for bedrooms and living rooms made of wood and sector furniture of wooden veneer) and TON (focusing on bentwood furniture, namely chairs, armchairs, and tables). Both companies employ more than 500 employees. Other producers with more than 250 employees include KOVONA SYSTEM (focusing mostly on production of metal shelves, and office metal-furniture and laminated chipboard), FALCON MIMON (focusing on bentwood furniture, chairs and armchairs; in the past concentrated mostly on the American market), ITAB Shop Concept CZ (producing shelf-systems for retail chains) and KORYNA (top producer of the kitchen furniture).

Total value of production of Czech producers was CZK 33 957 million in 2010. As it can be seen in Table II, production of the industry experiences a decline from 2007, with the most dramatic fall in 2008. This fact is a logical consequence of the economic recession of the Czech Republic as a result of the world economic crisis.

Production volume can be compared with the data on sales of Czech furniture producers, which are shown in Tab. III. The year 2007 was rather successful – in spite of a slight decrease of production volumes, they have reached higher sales in comparison with the previous year.

Biggest furniture producers in the Czech Republic have a very small share on total sales, e.g. JITONA has less than 4% share (3.75 in 2009). Ten biggest furniture producers have had the share of about 18% on total sales of the industry in 2009¹.

I: Structure of firms based on number of employees (for 2010)

Category	Without employees*	1-9	10-49	50-249	250 and more
Number of firms	15 805	1185	361	131	6

^{*} including firms that do not report the number of employees

 $Source: Data from the public database of the Czech statistical office (\r{C}S\'{U}VDB, 2010), categorized by authors$

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m II:}~~Output~of~furniture~manufacturing~companies~in~the~period~2001-2010$

Year	2001	2002	2003	2004	2005
Output [CZK million]	35888	38 577	34 501	36 084	36728
Year	2006	2007	2008	2009	2010
Output [CZK million]	36846	42 614	42 221	35 093	33 957

Source: Data from Czech statistical office (ČSÚ, 2011c)

III: Sales of furniture producers in the period 2005-2009

Year	2005	2006	2007	2008	2009
Sales revenues [CZK mil.]	37 129	37 669	40 405	38 609	31 596

Source: Data from Czech statistical office (ČSÚ, 2010a), compiled by authors

¹ Authors' estimation – KORYNA did not publish the data for 2009.

From the viewpoint of domestic sales and services, the furniture production industry is not very concentrated, and thus the concentration represents an important influence on the intensity of rivalry.

Tab. IV shows ten biggest furniture producers rank-ordered based on the total sales volume (including exports). It also shows the percentage of exports and volume of sales within the Czech Republic. From this viewpoint it is possible to compare the biggest Czech producers (with the highest share on domestic sales), when the first position is occupied by KORYNA. The biggest producers from the viewpoint of the number of employees, on the other hand, occupy the seventh and fifth place. The table clearly shows that the biggest Czech producers are strongly exportoriented.

Diversity of competitors

One of the sources of competitors' variety is their different size (see Tab. I). Different competitors have different objectives, use different methods and approaches to competition and implement different strategies. Small businesses can operate independently, cooperate or supply the bigger producers (produce components and semi-finished products for final adjustment and assembly of furniture).

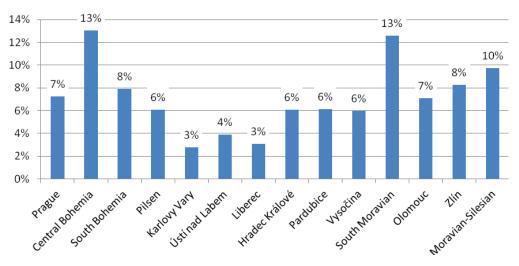
Owing to the fact that the furniture production industry can be characterized by a significant number of SMEs, furniture producers can be found in every region of the Czech Republic. Regional distribution of furniture producers in particular regions of the Czech is shown in Fig. 1. The biggest producers can be found in the regions of Zlín (TON, KORYNA), South-Bohemia (JITONA), Moravia-Silesia (KOVONA SYSTÉM), Liberec (FALCON MIMOŇ) and South-Moravia (ITAB Shop Concept CZ).

Diversity of competitors can also be evaluated from the viewpoint of production programs. Furniture made of different materials (wood, metal, synthetics) increases the diversity of competitors, which influences the intensity of rivalry. Producing

IV: Biggest Czech furniture producers and their sales revenues (for 2010*)

Furniture manufacturing companies	Total sales [thousand CZK]	Percent share of export	Domestic sales [thousand CZK]	Ranking based on domestic sales
JITONA, a. s.	1 155 592	93%	80891	7.
BJS CZECH, s. r. o.	827 314	99%	6811	10.
KOVONA SYSTÉM, a. s.	738 257	81%	140 269	6.
TON, a. s.	612 048	73%	166 012	5.
ITAB Shop ConceptCZ, a. s.	439 375	55%	198 864	4.
TECHO, a. s.	379 582	41%	222 488	3.
BLANÁŘ NÁBYTEK, a. s.	375 580	25%	281 685	2.
KORYNA nábytek, a. s.	360 575	20%	288 460	1.
KOVONA, a. s.	279 203	78%	62734	8.
UNIKOV, spol. s r. o.	182 274	73%	49214	9.

^{*} Most recent data for ITAB Shop Concept CZ – 2009, and for KORYNA – 2008. Source: Data from MSp ČR (2011) and Creditinfo (2011), own recalculation



1: Geographic scope: Percentage distribution of Czech furniture producers in particular regions (data for 2009) Source: Data from Czech statistical office Public database (ČSÚ VDB, 2010), compiled by authors

furniture of different materials also differentiates production processes.

Another important influence on diversity of competitors represent strategic intents, way of distribution and market focus (markets or countries of exports) of particular producers.

Wooden furniture production is dominated by JITONA, TON, and KORYNA. Most of Jitona's production (96% snare on turnover) is exported. Exports mostly go to Germany, Great Britain, Austria, and Denmark. Biggest customers of Jitona include the retail chain IKEA (ČTK, 2011c). TON is a world-known producer exporting approximately 80% of its production. Main customers come from Germany, Britain, U.S.A., Japan, Australia, and China (Honsová, 2010). KORYNA, leading Czech producer of kitchen furniture, but producing also a furniture for living rooms and bathrooms, exports approximately 80% of its production, and does not cooperate with any retail chain. It has got its own 55 kitchen studios and 15 contract-retailers. Most important export locations include Kazakhstan, Slovakia, Russia, and Ukraine (ČTK 2011c).

Industry growth rate

After 1989 the Czech market was entered by the big retail chains like Swedish Ikea, Asko, Sconto, and Europa Möbel. Later on they were joined by Danish Jysk (first outlet in the Czech Republic opened in 2003), Austrian KIKA (started in 2005), and another Austrian company XXXLutz, which entered the Czech market in 2010. Significant Czech producers include JENA, which exists from 1999. Entrance of new companies focusing on furniture retail shows an attractive profit potential of the industry. This potential, though, is closely connected with retail chains, which purchase a lower-quality cheap furniture abroad, and sell it in a Czech market with high margins. As Jiří Fryšták, CEO of Koryna, says (in Zelenka, 2010), imports to the Czech Republic are mostly a lower quality furniture (made of worse materials), and retail chains offer it for high prices (in his opinion, the product of CZK 20 thousand value is sold for CZK 50 thousand). Thus the retail chains can afford very costly marketing campaigns and big discounts.

Czech furniture producers, though, face a lower demand for their products. E.g. Jitona was forced

to restructure its production in 2011 due to the low demand (furniture production will be kept only in two branches, the third one will concentrate on production of the strategic input – face veneer format, and adjustment of furniture made to order). As the CEO Martin Kovář said, production capacity in the three factories was not utilized for a long term and, furthermore, the Czech market have experienced a significant decline – sales of furniture in the Czech Republic declined from CZK 36 400 million to CZK 31 350 million (ČTK, 2011a). Similar reasons have lead to a short-term insolvency of Koryna in 2011.

Table V shows annual changes of sales of furniture, divided into industrial sales, retail sales, and direct exports. The decline has to be considered in the context of the status of national economy (Economic cycle). Till 2007, the domestic sales have had a growing trend.

Stage of industry life-cycle

Each of the stages of industry life-cycle can be described by a number of characteristics (sales growth, frequency of technological changes, product demand, quantity of customers, level of profitability, amount of international competitors, type of innovative activities).

Audretsch, and Feldman (1996) have identified that product innovative activities tend to be the biggest during the introductory and growing stages of life cycle. As the industry matures, product innovations tend to decrease in intensity. Barney and Hesterly (2010) point out that in the early stages of industry development, product innovation is very important and over the time process innovations become more important and are more intensive than product innovations.

Relationship between process and product innovations in furniture industry in the Czech Republic suggests that the industry occurs at the mature stage. This conclusion is also confirmed by the data on industry growth.

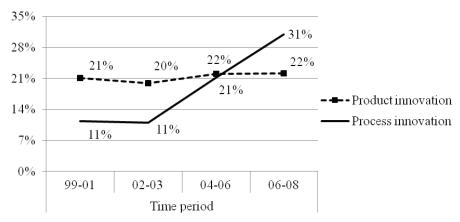
Other influences

Other influences include exit barriers, capacity, economies of scale, size of capacity augmentation, product differentiation, switching costs and strategic intents.

V: Sales in furniture production industry (annual changes)

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Year	2001	2002	2003	2004	2005
Industrial sales	11.3%	-8.9%	-8.0%	8.3%	2.2%
Retail sales	9.7%	9.0%	-19.6%	25.2%	-14.3%
Direct exports	13.1%	-27.5%	10.3%	-11.1%	28.9%
Year	2006	2007	2008	2009	2010
Industrial sales	5.6%	11.5%	-6.6%	-12.9%	-8.5%
Retail sales	11.0%	21.4%	-10.8%	-18.6%	-10.9%
Direct exports	-0.1%	-0.3%	-0.4%	-5.4%	-5.8%

Source: Data from Czech statistical office (ČSÚ, 2010b), recalculation by authors



2: Relationship between process and product innovations in furniture industry in the Czech Republic – percent-share of innovative firms in time periods from 1999 to 2008 Source: Czech statistical office (ČSÚ, 2010), compiled by authors



3: Segmentation of consumers based on their shopping behaviour Source: INCOMA GfK (2007)

Exit barriers in furniture production include the ownership of specific assets. Majority of the production facilities cannot be used in a different industry. Just the basic production equipment costs approximately CZK 1.5 million (they can be decreased when buying used or lower-quality equipment). Existence of exit barriers increases the risk of excessive capacity within an industry, which subsequently increases the intensity of rivalry. Certain excessive capacity exists in case of bigger producers (as it was mentioned above) – in connection with economic crisis. These companies, though, have sufficient strength to adjust their production (see above the example of Jitona and its restructuring efforts).

Increasing capacity in high amounts can cause imbalance between supply and demand. Recently, there were no significant capacity increases, though. There were rather some restructuring activities aiming on capacity cuts. And then, capacity can be increased gradually, and there is no necessity to add big volumes of capacity.

Economies of scale can be reached in furniture production. Serial production enables big companies to achieve savings in unit costs. They do not represent, though, an impulse to capacity increases.

There do not operate only Czech furniture producers, though, in the Czech furniture market, but also retail chains, which mostly sell products produced outside of the Czech Republic. These retail chains have significantly increased the intensity of rivalry in the furniture market. This market is dominated by IKEA, Kika, Sconto and Asko. In 2010, the Czech market was also entered by XXXLutz. These chains continued in their capacity increases in 2011. According to Nováková (2010), they are also not afraid of an open fight with competition in one locality and thus they significantly increase the intensity of rivalry. Talking about strategic intents of big Czech producers, who are strongly export-oriented, their attention is – according to the opinion of the secretary of the Association of the Czech furniture producers starts to orientate to the domestic market (Honsová, 2010). This fact will also significantly increase the intensity of rivalry among the Czech furniture producers.

Differentiation of production in furniture production is currently not very significant. This can be proved by the purchase behaviour of consumers. Based on a market research done by INCOMA GfK (2007), Czech customers can be divided according to the purchasing habits and behaviour into four main categories (see Fig. 3). These include "demanding designer", "demanding conservative", who emphasize quality and design of furniture (of either classical or modern design), and two groups of pricesensitive customers – "undemanding economist" (deciding almost solely by the price), and "trends-

desiring customer" (group of young customers for whom the high price represents a barrier due to their limited budgets).

More than a half of customers have stated price to be one of the most important selection criteria. The research, though, have shown that the customers are not loyal to one brand (producer). This fact increases the intensity of rivalry of the current companies. Low product-differentiation does not operate as a significant entry barrier to the furniture production industry.

Switching costs in the case of consumers are none. In case of retail chains they are not significant. Retail chains can have long-term contracts with certain suppliers, but change of supplier (furniture producer) is actually connected only with a change of transportation costs.

CONCLUSION

Results of the analysis of intensity of rivalry in the Czech furniture production industry are summarized in Table VI. Particular factors are evaluated in the form of their current state, significance of their influence on furniture production in the Czech Republic and their own influence on intensity of rivalry. Except for structural changes happening in connection with the global economic crisis and its development, which impacted the sales in various industries (e.g. Janda *et al.*, 2010; Chládková, 2008), there were also influences of managerial decisions done in the examined period (Tomšík, Svoboda, 2010).

Furniture production industry is not very concentrated from the viewpoint of sales for own products and services. The biggest Czech furniture producers have market shares up to 4% of the Czech market. It is partly given by the fact that they usually focus on exports. This fact increases the intensity of rivalry in furniture market as well as the operation of retail chains.

The table separately evaluates the market growth and stage of the life cycle. These factors are closely connected, even though the industry growth rate is currently strongly influenced by the economic situation. Therefore they are also evaluated separately. An interconnection can also be found between exit barriers, existence of an excessive capacity, economies of scale, and size of capacity augmentation.

Resulting evaluation of the analysis of particular factors influencing intensity of rivalry within the Czech furniture production industry is, that based on the findings, the intensity of rivalry within this industry is high.

Company managers should be well aware about the existence and understand the nature of influences on rivalry intensity within the industry, where they operate. Performed analysis shows that there currently exist a number of factors, which increase the intensity of rivalry within the furniture production industry in the Czech Republic, which significantly influences the profit potential of firms within this industry. The most important influences in the current situation of the Czech furniture production include the size and growth of the market, and number and size of competitors (both increase the rivalry). In terms of the number and size of competitors, we can expect a further growth of concentration, but a continued existence of many small producers - due to the individual character of demand, and big influence of individual taste. Main emphasis of strategies of furniture producers will thus be put on individualization of their offer. From the viewpoint of acquiring a detailed outline of the situation within an industry, this analysis (as well as application of the whole Porter's model) should not be the only tool used by managers of firms operating in an industry. There exist a number of other tools, which can serve as a supplement to this analysis. All these tools, though, have a common objective: to help strategists in identification of the current position of their firms, and facilitate their search for opportunities for the future development.

VI: Resulting evaluation of the influences on intensity of rivalry on the basis of Porter's approach (elaborated by authors)

Factor	Situation	Importance in industry	Impact on intensity of rivalry
Industry concentration	low concentration	high	increase
Diversity of competitors	high diversity	high	increase
Industry growth rate	affected by recession	high	increase
Product differentiation	low differentiation	high	increase
Stage of industry life-cycle	maturity	medium	increase
Exit barriers	specialized assets	medium	increase
Switching costs	none occur	low	increase
Excessive capacity	temporarily	low	increase
Economies of scale	possible to achieve	low	neutral
Size of capacity augmentation	none recent occurrences	low	neutral
Strategic intents	grow	low	medium

SUMMARY

This paper focuses on identification and description of the factors of competition within the Czech furniture production industry. Objective of this paper is to look more closely at the particular factors influencing the intensity of rivalry identified by Porter (1994), and identify their current influence in the Czech furniture production industry.

Furniture production is dominated by small entrepreneurs (physical persons) and small firms up to 10 employees (more than 90%). Biggest furniture producers in the Czech Republic from the viewpoint of the number of employees include JITONA, TON, KOVONA SYSTEM, FALCON, ITAB Shop Concept CZ, and KORYNA (all of them have more than 250 employees).

Most important factors influencing the intensity of rivalry are industry concentration, diversity of competitors, industry growth rate, and product differentiation. These factors are paid more attention, in the paper.

The paper evaluates industry concentration based on sales for own products and services. These sales, though, include also exports. An interesting finding represents the fact, that the biggest producers have low market shares – ten biggest producers of furniture in the Czech Republic have about 18% share on the total sales of furniture within the Czech Republic. From the viewpoint of domestic sales for own products and services, the industry is not very concentrated.

The overall evaluation of the intensity of rivalry among the current competitors is that it is high and gradually growing. Its increase is caused by almost all of the factors identified by Porter.

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