CHIP AND CHIPLESS WOODWORKING PROCESSES, 10(1): 31–36, 2016
Zvolen, Technical University in Zvolen, ISSN 1339-8350 (online), ISSN 2453-904X (print)

ANALYSIS OF MARKET DEVELOPMENT WITH SAW LOGS IN CONDITIONS OF CENTRAL EUROPE

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Abstract
Paper analyses the market development for coniferous and non-coniferous sawlogs from world aspects and in conditions of central Europe. Analyzed Period was from 2008 – 2014 (respectively 2016). Evaluated were supplies volume and prices for spruce, fir and beech sawlogs in this period, for countries: Slovakia, Czech Republic, Germany and Austria. In the last six years, prices of wood assortments increased generally. The fact of the potential risks and opportunities shows, that the timber market could be still dynamically increasing sector, in the future operating on the principle of sustainability. In the future can be expected pressure on prices of coniferous sawlogs.

Key words: *saw-logs, wood prices, market development, wood supplies*

1. INTRODUCTION

The current situation on the timber market, in global and Central European aspect corresponds to the economic and political background, global climate changes and accidental natural phenomena. The demand for timber and timber products is linked mainly to development of building activities, as well as to development of the energy sector. Geopolitical development in last three years (the Arab Spring, the crisis in Ukraine, War in Syria and refugees crisis), together with the increasing intensity and extent of incidental fellings, have a significant impact on the market with timber and timber products. In the paper are analysed the sawlogs supplies development in Slovakia, Austria, Germany and the Czech Republic in the period of last six years. Analysis of the development offers several alternatives in the future for the wood products producers, for who this assortment is the most important raw material. The paper also evaluate current state and perspectives for the market development in this field. The aim is also to determine the future prognosis of development and to identify key factors that will influence the future development.

2. MATERIAL AND METHODS

Development of the supply volumes of sawlogs were evaluated on the basis of data obtained from the Green Report issued by the Ministry of Agriculture of Slovakia and also in the Czech Republic [1,2]. Data for Germany were acquired from the "Holzmarktbericht" [3] and for Austria "Holzeinschlagsmeldung"[4]. Assessment of price developments was focused on sawlogs assortments from spruce, fir and beech trees in selected provinces in

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Austria, Czech Republic and Slovakia. The analysed period represents the period from 2008 to April 2016. The prices for the period when Slovakia still used the Slovak Crown (SKK) as a currency were converted to € $.m^{-3}$ using the National Bank of Slovakia exchange rate [5]; in the case of the Czech Republic the prices were calculated using the exchange rate of the National Bank of the Czech Republic [6]. The prices of assortments for Austria are in the trade parity on forest roads or forest warehouse. Prices in Slovakia and Czech Republic are placed on parity FCO (ex-warehouse vendor, respectively FCA (loaded truck purchaser). In order to provide absolutely correct comparison, it is necessary to add the transport costs to the Austrian prices (eventually parity DAF or CIF). Information on price developments have been drawn from the magazine Holzkurier [7], the Czech Statistical Office [8] and the forestry market information system [9].

3. DEVELOPMENT OF THE VOLUMES OF PULPWOOD SUPPLIES

3.1 Development in the world

Figure 1 shows the world production volume of sawlogs in time period from 1992 to 2014. The highest volumes for this period was reached in years 2005 – 2007 (over the 1,1 milliard m^3). This period was also sign as a “golden age” for the wood processing industry. After the global economic crisis in 2009 was a significantly decrease in sawlogs production under the 900 million m^3. In 2014 was again the world production volume over the 1 milliard m^3, despite the fact, that the world wood stock decrease. The highest share on this supplies has Americas continents and Europe (together 75 %).

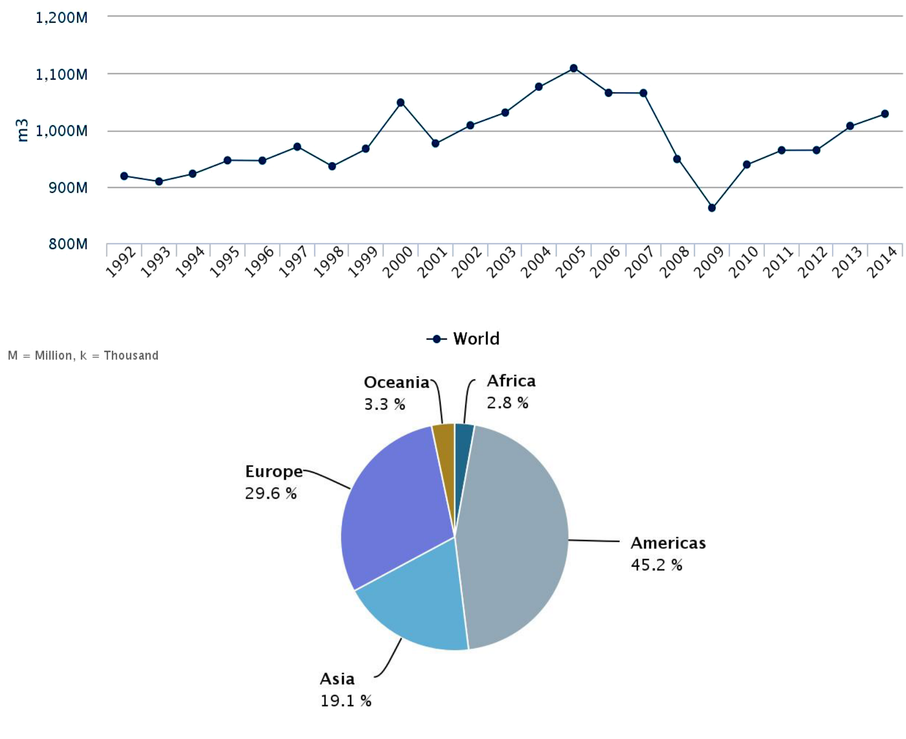

Figure 1 Sawlogs volume supplies in World for time period 1992 – 2014 (source: FAO).

3.2 Development in Central Europe

Table 1 shows the development of sawlogs supplies in selected countries of central Europe. In coniferous sawlogs can we observed the general decrease in period 2010-2013. In the 2014 was in all countries (except Austria) the slightly increase for the sawlogs volume supplies. Nearly 90% of all wood processors in Slovakia are focused on sawn processing of coniferous wood. Partial impact on the decreasing trend has also the revision of the technical standard STN 48 0055 from year 2007, which has fundamentally affected the production possibility of the coniferous assortments in I. and II. quality class. The Czech Republic has for the last three years relative stable supplies level.

In the supplies of non-coniferous raw wood assortments have the highest share assortments of pulpwood and industrial wood. This is partly related to the settings and preferences of the wood-processing industry. For more valuable purposes of the processing are mainly in tree species oak, maple and ash. The supplies of non-coniferous saw-logs are also affected the tree species composition in the Forest. In the forests of Austria, Germany and Czech Republic are dominant the coniferous tree species. Only in Slovakia is dominant the beech. Generally was the trend for this assortment in last 6 years in all countries slightly increasing (Table 1). Also it influences the progressive development of wooden buildings and various support programs in some countries.

Table 1 Supplies volumes of sawlogs in selected countries of Central Europe for the period 2009 - 2014

	Coniferous logs III. quality class					
Country/Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Slovakia	3 295 465	3 707 457	3 315 963	2 738 391	2 388 043	3 079 215
Austria	8 816 439	9 892 962	10 064 816	9 358 593	9 052 196	8 585 106
Germany	23 072 000	26 952 000	25 497 000	23 457 000	23 784 000	24 917 000
Czech republic	8 332 310	8 982 312	8 014 152	7 911 000	7 925 000	7 955 000
Non-Coniferous logs III. quality class						
	2009	**2010**	**2011**	**2012**	**2013**	**2014**
Slovakia	897 373	1 241 970	1 352 606	1 392 987	1 501 459	1 498 766
Austria	288 466	274 420	320 876	295 086	267 120	270 120
Germany	2 409 000	2 826 000	3 520 000	3 175 000	3 058 000	3 197 000
Czech republic	520 140	445 060	823 845	710 000	720 000	593 000

3.3 Perspectives for the sawlogs supplies in the future

It is undisputed, that in Slovakia the disposable volume of coniferous sawlogs fall. As a result of global climate change and stand conditions, will increase the beech abundance, while abundance of spruce and fir trees will fall. Due to the extensive accidental felling from previous years, it will decrease the volume of intent annual cut in the next decade. In connection with fixation of the processing industry, can be forecast in the near term, a strategic lack of this assortment.

The situation is worsened with the long-term contracts concluded by the biggest Forest manager in Slovakia (50%) Lesy SR, state enterprise, with four selected companies ("arrogant contracts") and with the guaranteed delivery volume of coniferous sawlogs for the company PRP. These contracts over the next three years essentially blocked out all the disposable volume of coniferous sawlogs from 50 % Slovakian forests and for other customers there's nothing left (Figure 2).

Also developments in other countries confirms the slight decrease in the supplies volume of coniferous sawlogs and increase the available volume of non-coniferous sawlogs. In the future can be expected pressure on prices of coniferous sawlogs. Segment of non-coniferous sawlogs will probably increasingly influenced by the development of the energy sector on base renewable energy sources.

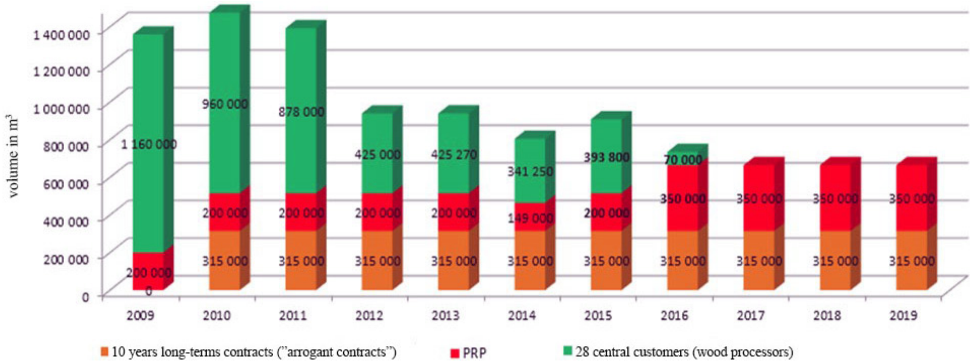

Figure 2 Development and forecast for the supplies of coniferous sawlogs from Lesy SR, š.p. (Source: Patráš, 2015)

4. DEVELOPMENT OF THE SAWLOGS PRICES

The development of sawlogs prices is affected with a large number of factors. The most crucial influence had the intensity and extent of incidental felling together with a local and global economic and political situation. In this chapter we focused mainly on the analysis of the sawlogs prices development, mostly traded wood species, spruce, fir and beech in selected provinces in Austria, Slovakia and the Czech Republic for the period 2008 - April 2016. The influence of certain factors on the wood prices in most countries of Central Europe is very similar. We will focus on analyzing the causes of prices, developments in a given period.

4.1 Price Development for the Spruce and Fir Sawlogs

Figure 3 represent the price development for the sawlogs, from wood species spruce and fir in Slovakia, Czech Republic and selected regions of Austria. After global economic crisis and decline in construction activities in some countries in the first half of 2009, prices for this assortment decreased in all monitored countries to minimum levels. Since that time, practically still continuously increase until the end of the year 2014. In Austria and the Czech Republic a several enterprises got into economic problems in 2014 and decreased its production capacities. For the prices of sawlogs this reality didn´t have any significant impact. The situation has been changed after the windstorm Niklas. In fact, every major wind calamity in 10 years negatively affected the prices of coniferous sawlogs.

4.2 Price Development for the Beech Sawlogs

Figure 4 represents the price development for the sawlogs from wood species beech in Slovakia, Czech Republic and selected regions of Austria. The highest Slovak price levels in the monitored period reached the beech sawlogs just at the beginning of 2009. The minimum was reached in early 2010. At the beginning of 2012, prices have slightly increased and remained at this level basically stable for two years. A similar pattern can be observed in the Czech Republic, although the forests species composition in this country, compared to the Slovak, is significantly different. In Austria the trade with higher quality of broadleaved assortments is seasonal. Since 2013 it has fundamentally changed the methodology of prices information (in Salzburg started to roll out prices for different kind of beech sawlogs assortments), so it was not possible to compare continuously during the entire period. During 2014 it was recorded for a mixed assortment of A/B in different classes of thickness a significant increase of more than 10 € per m^3. Certainly it contributed to various state programs aimed at promoting the beech and products thereof.

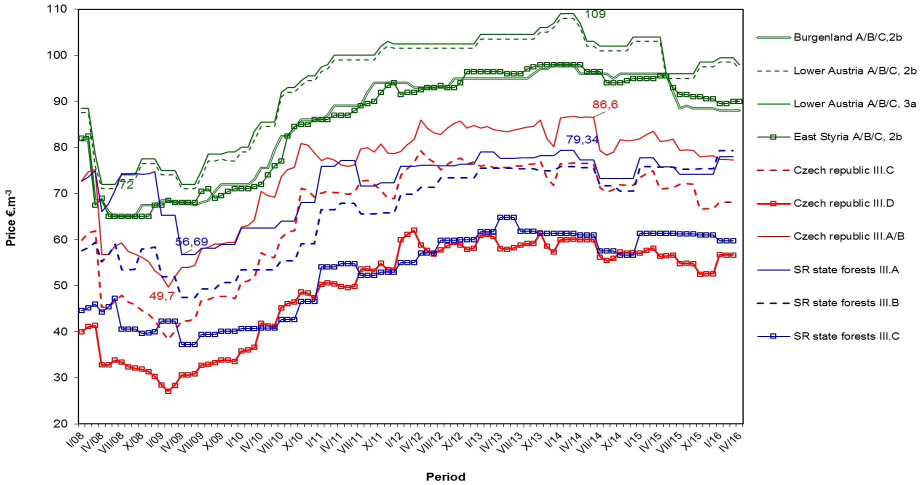

Figure 3 Development of spruce and fir sawlogs prices in Slovakia, Czech Republic and Austria

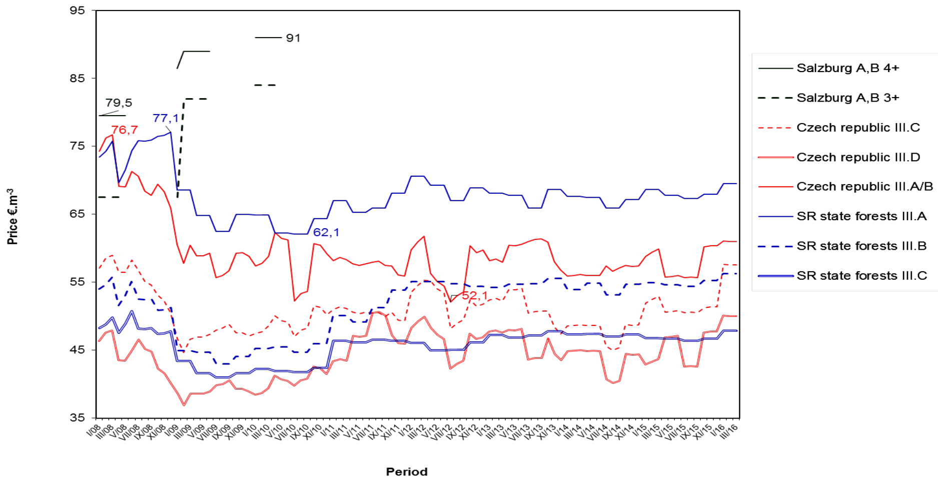

Figure 4 Development of beech sawlogs prices in Slovakia, Czech Republic and Austria

5. CONCLUSION

In the last six years, prices of wood assortments increased generally. The timber market has been partly recovered after the economic crisis. Also wood consumption and sawn-wood production have in Europe slightly increasing trend. Sale of beech saw logs and its use is problem in all Europe. Future market developments must be seen in the context of the international timber trade. Europe uses export quotas only to 15%, while in China it is 75%. Sanctions and economic decline in the Russian Federation resulted in an increase in wood exports from Russia. A large part of China's forests, as well as Japan's, are protected by various measures, so that these countries are largely dependent on wood import. The development of sawmilling industry in Europe is inhibited mainly by the legislation. The fact of the potential risks and opportunities shows, that the timber market could be still dynamically increasing sector, in the future operating on the principle of sustainability.

Acknowledgment
The research described in this paper was financed jointly by the Cultural and Educational Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic (Project No. 011TU Z-4/2015 New forms and methods in the education of the forest mechanization; Project No. 003TU Z-4/2015 - Development of Conceptual thinking at technical universities).

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