Czech University of Life Sciences Prague Faculty of Economics and Management Department of Economics



Market Analysis and Price Analysis of Agricultural Tyres Market in France: Case study Mitas

Diploma Thesis

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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DIPLOMA THESIS ASSIGNMENT

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Economics and Management

Thesis title

Market Analysis and Price Analysis of Agricultural Tyres Market in France: Case Study Mitas

Objectives of thesis

The aim of the thesis is to analyse different variables influencing agricultural tyres market in France, followed by price analysis of an agricultural tyre manufacturer, both determining the position on the French market with regards to its competitors.

Methodology

For the purpose of market and price analyses, it is used publicly available data from agricultural journals and public database of agricultural data, followed by internal analysis of an agricultural tyre manufacturer's operations and sales in France, including comparative analysis of prices of agricultural tyres in France.

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tyres, market, price, analysis, manufacturer, agricultural radial tyres, tractor, Mitas, France

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Declaration

I hereby declare that I have worked on my diploma thesis titled "Market Analysis and Price Analysis of Agricultural Tyres Market in France: Case study Mitas" by myself and I have used only resources mentioned at the end of the thesis.

In Prague on 21th March of 2016

..... Tomáš Husták

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Market Analysis and Price Analysis of Agricultural Tyres Market in France:

Case study Mitas

Analýza trhu a cenová analýza zemědělských pneumatik ve Francii:

Případová studie Mitas

Market Analysis and Price Analysis of Agricultural Tyres Market in France: Case study Mitas

Summary

The diploma thesis aims at the market analysis and the price analysis of agricultural tyres market in France. The diploma thesis focuses on a position of manufacturer MITAS and its brands of agricultural tyres among other tyre brands produced by competing manufacturers. Market analysis confirms current trends on the French market of agricultural tyres; fluctuating number of new registered tractors, changing power distribution of tractors, unfolding market share of tractor manufacturers, decreasing number of farm owners and increasing average size of farms. Agricultural tyres; Radial tyres and their volumes of sales of the most important category of agricultural tyres; Radial tyres and their volumes of sales distributed among dealers of agricultural tyres, and market share of agricultural tyres in three main dimensions of Radial tyres. Price indexes are set as a comparison to the market leader MICHELIN. Agricultural tyres brands produced by MITAS are compared in three groups of brands of agricultural tyres.

Keywords: tyres, market price, analysis, manufacturer, agricultural radial tyres, tractor, Mitas, France

Analýza trhu a cenová analýza zemědělských pneumatik ve Francii: Případová studie Mitas

Souhrn

Diplomová práce cílí na analýzu trhu a na cenovou analýzu zemědělských pneumatik ve Francii. Diplomová práce se zaměřuje na pozici výrobce zemědělských pneumatik MITAS a jím produkovaných značek pneumatik CONTINENTAL, MITAS a CULTOR mezi konkurenčními výrobci zemědělských pneumatik. Analýza trhu potvrzuje současné trendy na francouzském trhu zemědělských pneumatik; proměnlivý počet nových registovaných traktorů, měnící se rozložení výkonu traktorů, vyvíjející se podíl trhu výrobců traktorů, snižující se počet majitelů farem a zvyšující se průměrná rozloha farem. Trh zemědělských pneumatik je dále analyzován počtem prodaných radiálních pneumatik u prodejců zemědělských pneumatik a podílem trhu výrobců ve Francii. Cenová analýza porovnává cenové úrovně zemědělských pneumatik třech nejvýznamnějších rozměrů radiálních pneumatik. Cenové indexy jsou vytvořeny jako porovnání s lídrem trhu společností MICHELIN. Značky zemědělských pneumatik produkované společností MITAS jsou porovnány ve třech skupinách značek zemědělských pneumatik.

Klíčová slova: pneumatiky, tržní cena, analýza, výrobce, zemědělské radiální pneumatiky, traktor, Mitas, Francie

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1 Introduction

The diploma thesis is intended for market and price analyses which were done during author's internship which took place in company MITAS France from 1st June to 12th September 2015 in Dijon, France. The internship was done as a part of author's Master degree studies in Grenoble Ecole de Management in which he has been studying Master in Management programme as a part of a Double degree programme with his home university Czech University of Life Sciences in Prague, Czech Republic.

The thesis underlines company profile of MITAS. The main focus is on market and price analyses. These analyses are focusing on the position of MITAS manufacturer on the French market compared to its competitors. Market analysis of agricultural tyres in France analyses different variables affecting supply and demand of agricultural tyres in France such as; number of new registered tractors and its power distribution, market share of tractor manufacturers, number and size of farms in France. Agricultural tyres market is further analysed using volume of tyres sold according to its categories, focusing primarily on category of radial tyres and their volumes of trade by tyre dealers and market share of manufacturers in France. Price analysis compares price levels and range of products offered by different tyres manufacturers on the French market, focusing on the three most important tyre dimensions; Radial Standard 85, Radial 70, and Radial 65. These three dimension are divided into three groups of agricultural tyres brands; Premium tyres, Classic tyres, and Lower-cost tyres. Price analysis is based on current prices of tyre manufacturers operating in France, and in its second part it is analysed using sell in rates provided by tyre manufacturers, thus measuring price level and price attractiveness among tyre dealers in France. Results are further discussed by the author and several recommendations were presented to MITAS. The thesis also contains learning experience section in which it is described knowledge and skills gained during the internship in MITAS.

2 Objectives and methodology

Main objectives of the thesis are to conduct market and price analyses of agricultural tyres market in France in order to analyse supply and demand of agricultural tyres. **Market analysis** is based on analysis of current evolution of supply and demand; factors that are affecting agricultural tyres market in France. Supply is being analysed as developments on both sides; potential customers and related industries. Supply is analysed using purchasing power of farmers through evolution of number of farms in France and the EU-27, and number of new registered tractors that are purchased by farmers annually. Related industries, both supply and demand, are analysed using market share of tractor manufacturers in France and its development according to Horsepower of tractors. Another related industry analysed are tyre dealers operating and selling agricultural tyres in France. Finally, market share of manufacturers of agricultural tyres operating on the French market is analysed and position of MITAS is being compared to other tyre manufacturers.

Price analysis is conducted to compare price levels and range of products that are being offered by agricultural tyres manufacturers in France. Price analysis contains price comparison and positioning in three different categories of agricultural tyres; Premium tyres, Classic tyres, and Lower-cost tyres. MITAS is presented in all three categories and price and range of their products is being compared to other agricultural tyres manufacturers.

Company profile is analysed using Annual Report of CGS HOLDING from 2014 and using data provided by Central Procurement Department of CGS HOLDING, namely by its Director Zdenek HUSTAK.

Methodology used for **market analysis** contains publicly available data from database of European Commission EUROSTAT – statistics and indicators of agricultural and rural development, then INSEE – *Institut national de la statistique et des études économiques* in France, databases of Service de la Statistique et de la Prospective (SSP) of Ministry of Agriculture and Forestry in France. Other publicly available resources used are French agricultural magazines MACHINISME&Réseaux and Matériel Agricole, and online public database and articles of agricultural data available on internet portal Terre-net.fr.

The analysis of agricultural tyres market in France is done using MITAS internal database of annual sales of tyres in France which provided volume of market according to categories of agricultural tyres, number of tyres sold by dealers per year (including number of their agencies in France), and market share of agricultural radial tyres manufacturers. Data were provided by Xavier MENIGOZ, Director of MITAS France, and by Philippe MACHADO, Sales Representative of MITAS France.

Both analyses were processed using Microsoft Excel which is commonly used software for calculating, processing and presentation of findings. Analyses were also inspired and compared with internal analyses processed by MITAS France in 2009, provided by Xavier MENIGOZ, Director of MITAS France.

Methodology used for **price analysis** contains volume of agricultural tyres sold in France in 2014 sorted according to market share of different dimensions of agricultural tyres in each analysed dimension of radial tyres (Standard Radial 85, Radial 70 and Radial 65). These data were provided by Philippe MACHADO, Sales Representative of MITAS France. Price analysis is based on current price lists of all agricultural tyre manufacturers operating in France. These pricelists were available on the website of the manufacturers, others were provided by sales managers of MITAS France in cooperation with dealers. Results were processed by Microsoft Excel using the following equation:

IF(*SUM*(*of all prices of tyres in selected dimensions*))>0;*SUMPRODUCT*(*market shares of all dimension in the category; all prices of tyres in selected dimensions*)/*SUMIF*(*all prices of tyres in selected dimensions;*">0";*market shares of all dimension in the category*);0)

The second part of price analysis, focused on sell-in price values, is using sell in rates of all agricultural tyres manufacturers. These sell in rates were provided by Sales Representatives of MITAS France. These values of sell in rates were estimated, therefore analysis of sell-in prices provides only price estimates.

3 Literature review

3.1 Market and market segmentation

Market is defined as: "An actual or nominal place where forces of demand and supply operate, and where buyers and sellers interact (directly or through intermediaries) to trade goods, services, or contracts or instruments, for money or barter." (Business Dictionary, 2016)

"A market is a medium that allows buyers and sellers of a specific good or service to interact in order to facilitate an exchange. This type of market may either be a physical marketplace where people come together to exchange goods and services in person, as in a bazaar or shopping centre, or a virtual market wherein buyers and sellers do not interact, as in an online market." (Investopedia, 2016)

"In marketing, the term refers to the group of consumers or organizations that is interested in the product, has the resources to purchase the product, and is permitted by law and other regulations to acquire the product." (NetMBA, 2016)

Market definition is widely used analytical framework to examine and to evaluate competitive concerns. The relevant market should be defined in a way that the competitive constraints a firm faces, i.e. demand and supply side substitution, are captured as accurately as possible. (OECD, 2012)

Market definition serves several purposes in identifying the scope of competition in a market. The main goal of market definition is to assess the creation, existence, or strengthening of market power, which is defined as "the ability of the firm to keep the price above the long-run competitive level". The market shares of the respective firms provide an indication of market power. Market definition facilitates the identification of relevant competitors and is useful in evaluating the risk of potential co-ordinated effects in mergers. In addition, identifying the area of competition allows other relevant competition issues to be examined, such as potential barriers to entry. "The importance of market definition also extends beyond its role in analysing competition concerns: the concept is used as a basis for calculating fines, for estimating the effects on trade between EU member states and has served as a procedural model for other areas of law". (OECD, 2012)

In several types of markets, market shares and concentration measures might over- or underestimate the market power of firms and the potential competition effects. In differentiated product markets, the intensity of competition and substitution between products is a more important indicator of market power than market shares in assessing the effects of a merger. In bidding or auction markets, the closeness of competition between bidders tends to be a more informative concept in merger cases. Market definition is difficult to apply in two-sided markets, which involve platforms serving distinct groups of consumers in the presence of indirect network effects. For industries exhibiting rapid innovation, the boundaries of any defined marker can be unstable and market shares may therefore change rapidly over time. In cases of monopolisation or abuse of dominance, current market shares may not be a reliable indicator of market power if the firm has already increased prices significantly above the competitive level. In such retrospective cases of abuse of dominance, market definition is problematic as an unobservable counterfactual price has to be used in the market definition. If current prices are used instead, the market will be defined in overly broad terms, thus failing to identify situations where firms are able to exercise market power. (OECD, 2012)

In cases of monopolisation and abuse of dominance, instead of establishing dominance by looking at market share thresholds, it has been suggested to bypass the definition of the relevant market and establish dominance by considering the direct effects of the impugned conducts. While new tools have been designed to address the drawbacks of market definition for very specific markets and situations, there are many markets where market shares remain the best available indicators. If applied to cases they were not designed for, the new tools may produce unreliable and possibly even wrong results. (OECD, 2012)

Generally, competition authorities tend to embrace new instruments to complement rather than to replace market definition. This complementarity may be reinforced where the methodology and data requirements of new instruments are similar to those involved in market definition, as may be the case of pricing pressure indices. More research is needed to refine new instruments in order to improve their reliability and robustness as well as to assess their performance in comparison to market definition. Embracing new instruments effectively also requires skills and resources that are not currently at the disposal of competition authorities and practitioners. Market definition is considered of essential significance in abuse of dominance cases, but may be dispended with in cases of restrictive practices. (OECD, 2012)

Market definition begins with the total population and progressively narrows. Beginning with the total population, various terms are used to describe the market:

- Total population
- Potential market members of the population who have interest in acquiring the product
- Available market member in potential market who have enough money to buy the product
- Qualified available market those in the available market who are legally permitted to buy the product
- Target market segment of the qualified available market that a firm has decided to serve
- Penetrated market those in the target market who bought the product

Product refers to both physical products and services.

(NetMBA, 2016)

"Market segmentation is based upon developments on the demand side of the market and represents a rational and more precise adjustment of product and marketing effort to consumer or user requirements." (Smith, 1956)

"Market segmentation is the process of splitting customers, or potential customers, in a market into different groups, or segments, within which customers share a similar level of interest in the same, or comparable, set of needs satisfied by a distinct marketing proposition" (McDonald & Dunbar, 2004)

"Market segmentation involves aggregating prospective buyers into groups that have common needs and will respond similarly to a market action." (Kerin et al., 2008)

Market segmentation refers to subdividing a market along some commonality and similarity. Members of a market segment share something in common. The purpose of segmentation is the concentration of marketing energy and forces on the subdivision (or the market segment) to gain competitive advantage within the segment. Concentration of marketing energy is the essence of all marketing strategy, and market segmentation is the conceptual tool to help achieve this focus. (Thomas, 2007)

Geographic segmentation

Perhaps the most common form of market segmentation is geographic segmentation wherein companies segment the market by attacking a restricted geographic area. Corporations may choose to market their brand in certain countries, but not in others. A brand could be sold only in one market, one state, or one region. Many restaurant chains focus on a limited geographic area to achieve concentration forces. Regional differences in consumer preferences exist, and this often provides a basis for geographic specialization. Geographic segmentation can take many forms (urban versus rural, north versus south, seacoasts versus interior, warm areas versus cold, high-humidity areas versus dry areas, high-elevation versus low-elevation areas,...). Geographic segmentation is sometimes means to other types of segmentation. (Thomas, 2007)

Distribution segmentation

Different markets can be accessed through different channels of distribution. For example, a company might segment the market by selling the product to supermarkets under one brand name, to mass merchandisers under another brand, to other stores under another brand name, and to special customers under yet another brand name. This type of distributional segmentation is common, especially among small companies that grant each channel a unique brand to gain distribution within that channel. Other examples of distributional segmentation would be an upscale line of clothing sold only in expensive department stores, or a hair shampoo sold only through upscale beauty salons. (Thomas, 2007)

Price segmentation

A commonly widely used and practiced segmentation. Variation in household incomes creates an opportunity for segmenting some markets along a price dimension. If personal incomes range from low to high, the reasoning goes, then a company should offer some cheap products, some medium-priced products, and some expensive products. This type of segmentation is well illustrated by the range of automotive brand marketed by automotive manufacturers where for example automobiles brand are varied in price and status along a clearly defined spectrum to appeal to successively higher income groups. (Thomas, 2007)

Media segmentation

Not a very common segmentation, but media segmentation is sometimes a possibility. It is based on the fact that different media tend to reach different audiences. If a brand pours all of its budget into one media, it can possibly dominate the segment of the market that listens or read that media. Media segmentation is most often practised by companies that have some control over the media and can somehow discourage competitors from using that media. (Thomas, 2007)

Demographic segmentation

Common variables of demographic segmentation are gender, age, income, housing type, and education level. Some brand are targeted only to women, other only to men. Music downloads tend to be targeted to the young, while hearing aids are targeted to elderly. Education level often defines market segments. For example, private schools might define their target market as highly educated households containing women of childbearing age. Demographic segmentation almost always plays some role in a segmentation strategy. (Thomas, 2007)

Time segmentation

Is less common segmentation type, but can be highly effective. Some stores stay open later than others, or stay open on weekends. Some products are sold only at certain times of the year (Christmas, fireworks etc.). The time dimension can be interesting basis for segmentation.

In addition to the foregoing, markets can be segmented by hobbies, by political affiliation, by religion, by special interest groups, by sports team loyalties, by university attended, and hundreds of other variables. (Thomas, 2007)

Psychographic or lifestyle segmentation

It is based upon multivariate analyses of consumer attitudes, values, behaviours, emotions, perceptions, beliefs, and interests. Psychographic segmentation is a legitimate way to segment a market, if we can identify the proper segmentation variables, or lifestyle statements, words, pictures, etc. Qualitative techniques like focus group interviews, depth interviews, and ethnography become valuable. Qualitative research provides the insight, the conceptual knowledge, and the consumer's exact language necessary to design the segmentation questionnaires. Typically, verbatim comments from consumers are used to build batteries of psychographic or lifestyle statements (these two terms are used interchangeably). A large representative sample of consumers (generally 1000 or more) are then asked about the degree to which they agree or disagree with each statement. The method of data collection is very important because the questionnaire is usually long (ranging from 45 to 90 minutes in length). The telephone is not recommended for segmentation studies. Inperson interviews, or Internet-based interviews, or even mail surveys, are much better. Seeing is much better than hearing, and it produces more accurate answers. The Internet is especially valuable for segmentation studies, since respondents can take the survey at a time of their own choosing. (Thomas, 2007)

Analytical methods of market segmentation

Most segmentation analyses are based upon various types of cluster analysis: "a set of well-defined statistical procedures that group people according to the proximity of their ratings". Unfortunately, cluster analysis (regardless of its many types and forms) has inherent limitations and seldom yields coherent market segments. Cluster analysis ignores the pattern of respondent ratings and rely primarily upon the proximity of respondents ratings. This leads to clusters or market segments that do not seem to make much sense when compared with original segmentation variables. Another limitation of clustering approaches is that all statements are treated as equal; whereas in reality, some statements might be more important than others in explaining consumers' behaviour in a particular product category.

A better way to achieve a good psychographic segmentation is to first identify the statements that are more important. Correlation analysis and regression can be used for this purpose.

Factor analysis is also powerful technique to identify the statements and groups of statements that account for much of the variance in the attitudinal data set. These techniques can help in identifying the most important statements. Then these statements become the

inputs to the final segmentation analysis. Many different methods can be used to cluster or group statements at this point. It is necessary then to study the segments, and the attitudes/statements that make up each segment, to make sure they make sense. If segmentation results do not make sense, then it is necessary to go back, change some assumptions or methods, and re-run the analysis. (Thomas, 2007)

3.2 Market analysis

Market analysis (sometimes referred as marketing analysis) is "a study of the dynamism of the market. It is the attractiveness of a special market in a specific industry. Market analysis is basically a business plan that presents information regarding the market in which you are operating in. It deals with various factors". (PestleAnalysis, 2016)

A market analysis is done to formulate a strategy on how to run a business. To know how to operate a business, it is needed to take into consideration certain factors.

The most common factors are the SWOT analysis, an acronym for; Strengths, Weaknesses, Opportunities, and Threats. By assessing internal factors; company's strengths and weaknesses, the strategy can be made based on these factors. If a company has a good labour force, ample investments and good advertising experts, then marketing strategy focuses on these things. Similarly, if a technology is comparatively poorer and a company lacks online presence, then marketing strategy avoid these factors. External factors are opportunities and threats; economic factors, political instability, or even social changes can give an opportunity which can be seized. Considering all these factors, a marketing strategy can be implemented.

There are certain dimensions which can help to perform a market analysis. It helps to understand the market in which a company operates. Dimensions include:

- Size of the market
- Growth rate of the market
- Market trends
- Market profitability
- Key success factors

- Distribution channels
- Industry cost structure

Size of the market is a key factor for market analysis. The bigger the market the more competitors are likely to be present. For a big market, products and services of a company should stand out among others, otherwise customers can easily switch to a rival product. Bigger markets makes a company to rethink its pricing policy. Setting prices high may lose customer base to other competitors. Setting prices too low may lead people to think that a company provides cheaper and poorer quality.

Growth rate of the market is a huge factor in any sort of market analysis. It gives the information of how long the market will last. It is needed to analyse a growth rate of a market before making an investment.

Market trends are significant part of market analysis. Having knowledge about trends can help a company to decide what kind of product it is going to sell. It contains what do customers like, how much they are willing to spend, what other trends may capture their attendance. Market trends are changing so it can be an opportunity for a business to seize it. Changes of market trends can also be a threat if a company is not flexible in changing its product or service.

Market profitability is another part of market analysis. Most companies get into business to make a profit, they are profit-motive businesses. Before going into a business, it is needed to analyse the profitability of the market. If the market has a good profitability, then a company is going to invest heavily. Otherwise, it would be a waste of capital and time. In order to calculate the profitability of the market, it should be considered buyer power, supplier power, barriers to entry, etc.

Key success factors are those elements which help businesses to achieve great success in the market. Such elements are required to stand out among the rest of competition. There are the elements that enable a company to produce great results. Key success factors include technology progress, economies of scale, and efficient utilization of resources.

Distribution channels are very important for a business. Without those, a company will not be able to get products to customers. It is needed to assess how good the channels in the

market are. If the existing distribution channels are not good enough, it is needed to develop new ones. Sometime a company can come up with brand new distribution channel.

Industry cost structure is a significant factor while running a business. It sees how much cost is required to get the product for sale. Sometimes companies come up with ways to decrease that cost and thereby make bigger profits without increasing the market price. Doing a market analysis helps companies to come up with newer ways to reduce costs. At the same time, it helps to create strategies for developing a competitive advantage of competitors.

(PestleAnalysis, 2016)

3.3 Strategy and competitive advantage

Evolution of sophisticated customers and new technological era contributed to the growing intensity of competition. Greater attention has been put on analysing competitive behaviour and competitive strategies. Strategy pertains to the planned patterns of organisational adaptation to the environment by using available resources through which a business seeks to achieve its strategic goals – often sustainable advantage. (Conant, Mokwa, and Varadarajan, 1990; Matsuno and Mentzer, 2000).

Different strategies or strategy types and their effects on performance has been studied by large number of scholar in literature. However this relationship has not been tested in the context of market orientation along with different levels of each strategy. Therefore, the purpose is to understand the effect of market orientation on the strategy types and performance relationship. (Gokus, 2015)

As accepted in strategy literature, Miles and Snow's (1978) typology has had considerable influence on the field of strategic management. Along with Miles and Snow (1978), organizational adaptation to environment has been studied and classified differently by several researchers such as: Porter's (1980) differentiation-low cost, Levinthal and March (1993) focusing on customer-focusing on process, Rust, Moorman and Dickson's (2002) revenue expansion-cost reduction, Mizik and Jacobsen's (2003) value creation-value appropriation. Even though those classifications might have some differences in terms of project or firm level, Mizik and Jacobsen (2003) and Kyriakopoulos and Moorman (2004)

implied that they represent the process of organizational learning and are conceptually similar.

As Levinthal and March (1993) stated that organisational learning has been created by following either innovative or creative path, or efficient focused or process oriented path during the adaptation to environment. These two paths have been main course of the strategic typologies mentioned above and consequently, they are employed by our research.

Miles and Snow (1978) proposed a strategic typology interrelating organisational strategy and organisational resources within a theoretical framework. Although they identified three viable strategic types, and they differ primarily in terms of product-market strategy choices, current studies uses only two of those types which they are at the opposite end of the continuum. Prospector strategic types proactively seek and exploit new market opportunities and often experiment with responses to changing market trends. They aggressively compete on innovation, seeking first-mover advantages from developing new offerings and pioneering new markets. Defender strategic types focus more narrowly on maintaining a secure position in existing product-markets. They often compete through operations or quality-based investments that offer efficiency related advantages, rarely pioneering the development of new markets or products. (Gokus, 2015)

Although Miles and Snow's strategy typology is supported by researchers and gained respect in literature in theoretical perspective, operationalization and measurement of those strategy types needs further investigation. They used paragraph of categorical classification which may hinder the differences among companies. Companies which fall into the same category, prospectors or defenders in this case, are treated equally. In fact, they may not show the same features. Instead of putting each company into a certain strategy category, use of continuous approach treats companies differently for each category. In this way, it acknowledges the critical differences among companies and recognizes firms executing same strategy type in different levels (Woodside, Sullivan and Trappey, 1999; Levinthal and March, 1993).

Using a specific type of strategy in different level is important because companies allocate their limited resources on certain types of activities. Such as, some prospector firms depend on innovation and seek customers' preferences excessively. These types of firms involve many complex activities, decision-making freedom and work-routine flexibility to respond customers' needs and preferences on a timely basis. (Ruekert and Walker, 1987). Due to limited resources and concentration preferences, in such organisations it is very difficult to pursuit cost reduction and internal process related programs. (Treacy and Wiersema, 1995). Other prospectors may also excel in innovation and differentiation, however, since they do not use prospector strategy in high level, their structural and cultural characteristics may allow them to pursue cost-reduction strategies and internal process to experience some cost benefits. (Gokus, 2015)

In the same vein, some defenders rely on exceptionally established routines and standardized internal process to achieve cost based advantage (Ruekert and Walker, 1987). Since their functional groups are homogenous with routine activities, very low level of autonomy and very low risk taking activities; it is very difficult for them to identify customers' needs and preferences (Treacy and Wiersema, 1995). On the other hand, other defenders may not stress cost based values that much. Accordingly, those defenders structural and cultural characteristics will not be very tight and may allow them to practice innovative behaviour and customer oriented values in an acceptable levels. (Gokus, 2015)

3.3.1 Porter's Five Forces

Five Forces framework is not just the most widely used model for industry analysis, it is in fact one of the most popular strategic tools of the last two decades. It helps organisations identify the main sources of competition in their industry or sector, by examining five key factors, and is valuable to public and private sector organisations alike.



Figure 1 Porter's Five Forces (Porter, 1998)

The threat of potential entrants mean new competition from organisations who enter the marketplace, and which are able to replicate the organisation's products or services and means of production, and compete effectively in terms of price and quality. The harder it is for other organisations to perform this replication, the more advantageous that product or service will be.

The threat posed by substitute products exists where a product or a service can be easily introduced, obtained or adopted by the buyer, and can act as a potential replacement for that product or service.

The bargaining power of buyers – if the number of buyers is small compared to the number of suppliers, the buyers are in position to negotiate in terms of price or quality of product and service. The availability of substitute products and the cost to buyers of switching is also a factor in the bargaining power of buyers.

The bargaining power of suppliers – if a small number of suppliers exist, or where switching supplier is difficult or costly, the suppliers are in an advantageous position and may raise their prices to the organisation.

Competitive rivalry is high when a significant number of organisations offer buyers a similar type and quality of product for a similar price. Conversely, if an organisation is able to offer a product or a service that few or no other can, it will be in a very strong competitive position. Competitive rivalry is the only internal to the industry while other four forces are external.

(Porter, 1998)

3.3.2 Competitive advantage

National prosperity is created, not inherited. It does not grow out of a country's natural endowments, its labour pool, its interest rates, or its currency's value, as a classical economics insists.

A nation's competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain advantage against the world's best competitors because of pressure and challenge. They benefit from having strong domestic rivals, aggressive home-based suppliers, and demanding loyal customers.

In a world of increasingly global competition, nations have to become more, not less, important. As the basis of competition has shifted more and more to the creation and assimilation of knowledge, the role of nation has grown. Competitive advantage is created and sustained through a highly localized process. Differences in national values, culture, economic structures, institutions, and histories all contribute to competitive success. There are striking differences in the patterns of competitiveness in every country; no nation can or

will be competitive in every, or even most industries. Nations succeed in particular industries because their home environment is the most forward looking, dynamic, and challenging.

According to prevailing thinking, labour costs, interest rates, exchange rates, and economies of scale are the most potent determinants of competitiveness. In companies, these are merger, alliance, strategic partnership, collaboration, and supranational globalisation. Managers are pressing for more government support for particular industries. Among governments, there is a growing tendency to experiment with various policies intended to promote national competitiveness – from efforts to manage exchange rates to new measures to manage trade to policies to relax antitrust – which usually end up only undermining it. These approaches, now much in favour in both companies and governments, are flawed. They fundamentally misperceive the true sources of competitive advantage. Pursuing them will never achieve a real and sustainable competitive advantage. We need a new perspective and new tools – an approach to competitiveness that grows directly out of an analysis of internationally successful industries, without regard for traditional ideology or current intellectual fashion.

Around the world, companies that have achieved international leadership employ strategies that differ from each other. But while every successful company will employ its own strategy, the character and trajectory of all successful companies is fundamentally the same. Companies achieve competitive advantage through acts and innovation. They approach innovation in its broadest sense. They perceive a new basis for competing or find better means for competing in old ways. Innovation can be manifested in a new product design, a new production process, a new marketing approach, or a new way of conducting training. It often involves ideas that are not even new. It always involves investments in skills and knowledge, as well as in physical assets and brand reputations.

Some innovations create competitive advantage by perceiving an entirely new market opportunity or by serving segment that others have ignored. When competitors are slow to respond, such innovation yields competitive advantage. In international markets, innovations that yield competitive advantage anticipate both domestic and foreign needs. On the other hand, innovations that responds to concerns or circumstances that are peculiar to the home market can actually retard international competitive success. Information plays a large role in the process of innovation and improvement – information that either is not available to competitors or that they do not seek. Sometimes it comes from simple investment in research and development or market research; more often, it comes from effort and from openness and from looking in the right unencumbered by blinding assumptions or conventional wisdom.

This is why innovators are often outsiders from a different industry or a different country. Innovation may come from a new company, whose founder has a non-traditional background or was simply not appreciated in an older, established company. Or the capacity of innovation may come into an existing company through senior managers who are new to the particular industry and thus are more able to perceive opportunities and more likely to pursue them. Or innovation may occur as a company diversifies, bringing new resources, skills, or perspectives to another industry. Or innovation may come from another nation with different circumstances or different ways of competing. With few exceptions, innovation is the result of unusual effort. The company that successfully implements a new or better way of competing pursues its approach with dogged determination, often in the face of harsh criticism and though obstacles. In fact, to succeed, innovation usually requires pressure necessity, and even adversity: the fear of loss often proves more powerful than the hope of gain. Once a company achieves competitive advantage, through an innovation, it can sustain it only through relentless improvement. Almost any advantage can be imitated. Competitors will eventually and inevitably over-take any company that stops improving and innovating. Sometimes early-mover advantages such as customer relationships, scale economies in existing technologies, or the loyalty of distribution channels are enough to permit a stagnant company to retain its entrenched position for years even decades. But sooner or later, more dynamic rivals will find a way to innovate around these advantages or create a better or cheaper way of doing things. Ultimately, the only way to sustain a competitive advantage is to upgrade it – to move to more sophisticated types.

There are two additional prerequisites for sustaining competitive advantages. First, a company must adopt a global approach to strategy. It must sell its products worldwide, under its own brand name, through international marketing channels that it controls. A truly global approach may even require the company to locate production or research and development facilities in other nations to take advantage of lower wage rates, to gain or improve market access, or to take advantage of foreign technology. Second, creating more sustainable

advantages often means that a company must make its existing advantages obsolete – even while it is still an advantage. Innovation and change are inextricably tied together. But change is an unnatural act, particularly in successful companies; powerful forces are at work to avoid and defeat it. Past approaches become institutionalised in standard operating procedures and management controls. Successful companies tend to develop a bias for predictability and stability; they work on defending what they have. Change is tempered by the fear that there is much to lose. The organization at all levels filters out information that would suggest new approaches, modifications, or departures from the norm. The internal environment operates like an immune system to isolate or expel hostile individuals who challenge current directions or established thinking. Innovation ceases, the company becomes stagnant; it is only a matter of time before aggressive competitors overtake it.

(Porter, 1990)

The Diamond of National Advantage

When a national environment permits and supports the most rapid accumulation of specialised assets and skills – sometimes simply because of greater effort and commitment – companies gain a competitive advantage. Finally, when the national environment pressures companies to innovate and invest, companies both gain competitive advantage and upgrade those advantages over time.



Figure 2 The Diamond of National Advantage (Porter, 1990)

Factor conditions – according to standard economic theory, factors of production (labour, land, natural resources, capital, infrastructure – will determine the flow of trade. A nation will export those goods that make most use of the factors with which it is relatively well endowed. In the sophisticated industries that form the backbone of any advanced economy, a nation does not inherit but instead creates the most important factors of production – such as skilled human resources and scientific base. The most important factors of production are those that involve sustained and heavy investment and are specialized. To support competitive advantage, a factor must be highly specialised to particular needs of an industry. These factors are scarcer, more difficult for foreign competitors to imitate, and they require sustained investment to create. Nations succeed in industries where they are particularly good at factor creation. Competitive advantage results from the presence of

world-class institutions that first create specialised factors and then continually work to upgrade them.

Demand conditions – it might seem that the globalization of competition would diminish the importance of home demand. In practice, however, this is simply not the case. In fact, the composition and character of the home market usually has a disproportionate effect on how companies perceive, interpret, and respond to buyer needs. Nations gain competitive advantage in industries where the home demand gives their companies a clearer or earlier picture of emerging buyer needs, and where demanding buyers pressure companies to innovate faster and achieve more sophisticated competitive advantages than their foreign rivals. The size of home demand proves far less significant than the character of home demand. Home-demand conditions help to build competitive advantage when a particular industry segment is larger than or more visible in the domestic market than in foreign markets. The larger market segments in a nation receive the most attention from the nation's companies. More important than the mix of segments is the nature of domestic buyers. A nation's companies gain competitive advantage if domestic buyers are the world's most sophisticated and demanding buyers for the product or service. Sophisticated, demanding buyers provide a window into advanced customer needs; they pressure companies to meet high standards, they prod them to improve, innovate, and upgrade into more advanced segments. Demand conditions provide advantages by forcing companies to respond to tough challenges.

Related and supporting industries – Another determinant of national advantage is the presence in the nation of related and supporting industries that are internationally competitive. Internationally competitive home-based suppliers create advantages in downstream industries in several ways. First, they deliver the most cost-effective inputs in an efficient, early, rapid, and sometimes preferential way. Far more significant than mere access to components and machinery, however, is the advantage of that home-based related and supporting industries provide in innovation and upgrading an advantage based on close working relationships. Suppliers and end-users located near each other can take advantage of short lines of communication, quick and constant flow of information, and an ongoing exchange of ideas and innovations. Companies have the opportunity to influence their suppliers' technical efforts and can serve as test sites for research and development work, accelerating the pace of innovation.

Firm strategy, Structure, and Rivalry – National circumstances and context create strong tendencies in how companies are created, organized, and managed, as well as that the nature of domestic rivalry will be. Competitiveness in a specific industry results from a convergence of the management practices and organizational modes favoured in the country and the sources of competitive advantage in the industry. Countries also differ markedly in the goals that companies and individual seeks to achieve. Company goals reflect the characteristics of national capital markets and the compensation practices for managers.

(Porter, 1990)

3.4 Agricultural tyres

Agricultural tyres are suitable for tractors and other agricultural machinery and vehicles. Agricultural tyres provide driving capabilities both on road and on the fields. They are used on large areas, sometimes in conditions of extreme severity where maximum working flexibility is required. The special tread is being designed so that the load across the footprint allows ground pressure distribution, thus minimizing soil compaction. Tyres are suitable for soil preparation, planting and soil treatments. Range of agricultural tyres is from Low Power tractors to High Power tractors, allowing to carry very high loads at low pressure. The wide and deep lug design allows minimal rolling resistance, more traction and longer tyre life. The sidewall protector prevents tyre from damages and in combination with multiple layers of polyester belts provide an exceptional stability, handling and riding comfort. (BKT Agricultural Catalogue, 2013)

3.4.1 Agricultural tyres designation

Tyre

D – **Outer diameter**: the diameter of an inflated tyre at the outermost surface of the tread.

W – Section width: the linear distance between the outsides of the sidewalls of an inflated tyre excluding elevations due to labelling (markings), decorations or protective bands or ribs.

H – Section height: half the difference between the overall diameter and the nominal rim diameter.

R – **Static loaded radius**: distance between rim centre and paved surface.



Figure 3 Tyre designation (Continental Databook, 2015)

Rim

F – **Rim width**: the linear distance between the flanges of the rim.

- **G** Rim flange height
- Ø Nominal rim diameter

(Continental Databook, 2015)

3.4.2 Agricultural tyres size marking

Tyre example: 340/85 R 24

340 – nominal section width (in mm)

85 – Aspect ratio H/SW (in %)

R – radial construction

24 – nominal rim diameter (in inches)

Unit conversion: 1 millimeter (mm) = 0.03937 inches, 1 inch = 25.44 mm

Tyre example: 15.0/55 – 17

15.0 – nominal section width (in inches)

55 – aspect ratio H/SW (in %)

- Cross ply construction

17 – nominal rim diameter (in inches)



Figure 4 Tyre size marking (Mitas Technical Databook, 2016)

(Mitas Technical Databook, 2016)
3.4.3 Agricultural tyres sidewall marking

Tyre example: MITAS 480/65 R 28 RD-03 136 D

MITAS – Trademark of producer

480/65 R 28 – Tyre size marking

- RD-03 Tread Pattern Code
- 136 Load index (LI 136 = 2 240 kg)

D – Speed symbol (D = 65km/h)



Figure 5 Tyre sidewall marking (Mitas Technical Databook, 2016)

(Mitas Technical Databook, 2016)

Tyre example: CONTINENTAL CONTRACT 380/85 R 28 (14.9 R 28) AC 85 133 A8

CONTINENTAL CONTRACT – Trademark of producer

380/85 R 28 – Tyre size marking (in mm)

14.9 R 28 – Tyre size marking (in inches)

- AC 85 Tread Pattern Code
- **133** Load index (LI 133 = 2060kg)
- A8 Speed symbol (A8 = 40 km/h)



Figure 6 Tyre sidewall marking (Continental Databook, 2015)

(Continental Databook, 2015)

Speed symbols

Speed Symbol	A1	A2	A3	A4	A5	A6	A7	A8	В	D	F	J	K
Speed (km/h)	5	10	15	20	25	30	35	40	50	65	80	100	120

Figure 7 Speed symbols (Mitas Technical Databook, 2016)

Load index table see Appendix 2.

Unit conversion

1 millimeter (mm) = 0.03937 inches, 1 inch = 25.44 mm

(Mitas Technical Databook, 2016)

3.4.4 Difference between Radial and Cross-ply tyres

There was a need for more flexible tyres which were able to absorb shocks generated by road surfaces. Also machines and vehicles that use truck tyres or tractor tyres stronger tyres that could have been operated at higher capacities.

Cross-ply tyres have been used instead of full rubber tyres since 1898. They were standard feature in the car tyre industry before radial tyres were introduced.

Cross-ply (also known as Bias or Diagonal) tyre is a tyre in which the ply cords extend to the beads and are laid substantially at alternate angles less than 90° to the centre-line of the tread. A cross-ply tyre consists of multiple rubber plies overlapping each other. The crown and sidewalls are independent. The overlapped plies form a thick layer that is less flexible and more sensitive to overheating. See Figure 8.



Figure 8 Crossply tyre (Michelin Agricultural Tires, 2016)

Advantages of cross-ply tyres include improved vehicle stability, higher resistance against sidewall damages. Disadvantages of cross-ply tyres are high rolling resistance which causes tyres to quickly heat up, it has reduced driving comfort due to the tyre's rigidity, it has increased fuel consumption and generates more noise.

Radial ply tyres were developed in 1946 by MICHELIN. The radial tyre revolutionised the world of tyres and it put MICHELIN ahead of competition. Radial tyres shown spectacular research and innovation. Today, a full range of new products have been developed in conjunction with major agricultural machine manufacturers in response to the continuous evolution of farming techniques.

Radial tyre is a pneumatic tyre in which the ply cords extend to the beads and are laid substantially at 90° to the centre-line of the tread, the carcass being stabilised by an essentially inextensible circumferential belt. A radial tyre allows the sidewall and the tread to function as two independent features of the tyre. See Figure 9.



Figure 9 Radial ply tyre (Michelin Agricultural tires, 2016)

Advantages of radial ply tyres include good steering and better road contact, improved driving comfort due to flexible sidewalls, little heat generated in tyre high speeds, higher resistance against tread-related damage, and lower fuel consumption. Disadvantages of radial tyres are lower resistance against sidewall-related damage, lower stability than cross-ply tyre, and lower driving comfort due to its steel belt construction when colliding with minor bumps on the road.

(Mitas Technical Databook, 2016; Michelin Agricultural Tires, 2015; BigTyres, 2015)

3.4.5 Agricultural tyres production

Agricultural tyres production undergoes many stages of production. The following chapters describe basic materials and components of a tyre, followed by rubber compound mixing. The several tyre components are being discussed before they are further processed. Tyre building and curing process are the very last stages of production prior to final tests and inspections are made. The whole tyre production process is illustrated in the scheme in Figure 10. Each production process is described more in details in this chapter.



Figure 10 Tyre production scheme (Mitas Company Presentation, 2012)

Materials and components

The basic tyre components are steel wires, textile cords, natural or synthetic rubber, various chemicals and carbon black. The dominant component of tyres is a rubber. Rubber trees are grown mainly in South-East Asia from which a liquid latex is extracted. Natural rubber is the most important product obtained from latex. Rubber is then transported to the production plant with the rest of raw materials and components.

At a laboratory, the quality and the physical properties of the rubber are tested. If the sample complies with the requirements, it is delivered to the mixing room.

Rubber compound mixing

The first stage of tyre production is a rubber compound mixing. At the rubber mill, the rubber is mixed with various materials; these include fillers, clay and carbon black. At the last stage of mixing, sulphur and curing agents are added. The resulting compounds have various properties; some are used for the inner liner which holds air inside the tyre and other are more resistant and are used to make the tread. In the laboratory, the density of cured samples and other physical and mechanical properties are measured. The resulting blend is formed into rubber sheets and cooled, each batch is weighted and identified. After additional testing, the rubber compounds are used in further processing.

Tyre components

The basic components are produced during the further processing. These are: bead wires and rubber coated cords, other components are extruded and calendered from various rubber compounds. The basic components of agricultural tyres are; an inner liner which is used in tubeless tyres, first carcass ply, bead core and bead wire, then another carcass ply, bead lining and rim strip, belt plies, and finally the sidewall and tread.

a) Extruding and calendaring of tyre components

The mixed rubber compound is used for calendering the inner liner extruding the tread and sidewall. First, the rubber compound is heated. Then, the compound is put through extruder machines where the tread and sidewalls are formed in the required shapes. It is then cooled. The inner liner is produced by calendering.

b) Rubber coating

The mixed rubber compound is also used for rubber coating. Sheets of cord such as nylon, polyester and steel are coated on both sides. Once this is finished, the sheets are cut in correct angles which determine the tyres characteristics. These cut sheets are used for casing, belts and other plies. Steel cords are mainly used for the belts placed under the tread and sometimes for the casing.

c) Bead wire

Next, the bead wires are produced from rubber and steel. The beat core is formed by aligning steel wires with rubber. Then, the wires are being formed into bead rings. The number of bead wires is specific for each tyre.

Tyre building

At this stage, all tyre components are assembled. The tyre is made from components on the tyre building drum. Tyre building begins with sidewall and rim strip, followed by bead lining, inner liner and two carcass plies. Bead cores are placed on the building drum. Then the ply edges are wrapped around the bead core and the sidewall are moved into position while the tyre is reshaped. After inflation, belts and tread rubber are applied. This process achieves a green tyre that already reassembles the final product.

Curing of the green tyre

After tyre building, green tyres are cured in the process called vulcanisation in which the tyre achieves its final shape and characteristics. The green tyre place on the curing press. The curing process pushes the tyre into the tyre mould, rubber compound is heated and becomes plastic. It fills the whole tyre mould. The applied heat also initiated the vulcanisation process. During vulcanisation, polymers are linked by sulphur and it changes the molecular structure. The final product is a cured tyre.

Finishing and final inspection

Before the tyre is dispatched from the plant, it is inspected. Each tyre is visually inspected for defects. Testing machines measure the compliance of central and lateral runouts with the norms. All tyres undergo uniformity test. Tyres containing steel cords are inspected by x-ray for internal defects. The final inspection is the last stage of tyre production. The tyre is then stored and ready to be dispatched to the customers.

(Mitas Company Presentation, 2012)

4 Analytical part

4.1 Mission statement

MITAS France - Sales and Marketing Intern

Dijon, France

1st June – 12th September 2015

I. Market analysis of agricultural tyres market in France

II. Price analysis of agricultural tyres in France

As a Sales and Marketing Intern in MITAS France, main responsibilities were to provide support in sales and marketing activities of MITAS France which is selling agricultural tyres in France. The main tasks were to do a market analysis of agricultural tyres market and to develop a price tracking tool mechanism. In order to do a market analysis, it was necessary to find out variables influencing the market and then to search for available and the most recent data. These data were then further processed and compared internally with previous analysis done in 2009. Results confirmed existing trends in agricultural tyres market in France. Price tracking tool was developed to track price levels of all agricultural tyres manufacturers and also price attractiveness of different brands among clients and dealers. Both tasks provided essential results for sales in France.

4.2 Assignment overview

As Sales and Marketing Intern in MITAS France, the author was dealing with responsibilities to support sales and marketing activities of MITAS tyres on the French market during its switch brand strategy to MITAS PREMIUM products.

1. Market analysis

In order to understand French market of agricultural tyres, the author was interested in supply and demand of agricultural tyres and made a comparison with development in 2009. The author was particularly interested in the volume of supply and demand, and in different variables that are affecting it. Market analysis comprises of two parts:

- Analysis of different variables affecting supply and demand of agricultural tyres in France, which includes following variables:
 - i. Number of new registered agricultural tractors
 - ii. Number of new registered agricultural tractors according to Horsepower (hp)
 - iii. Market share of tractor manufacturers
 - iv. Number of agricultural farms and average size in Hectares (ha)
 - v. Average size of farms in 2007 and 2010 of EU-27 countries
- b) Analysis of agricultural tyres market in France, which includes following variables:
 - i. Volume of market according to categories of tyres
 - ii. Number of agricultural radial tyres according to volume sold by dealers
 - iii. Market share of agricultural radial tyres

2. Price analysis

The second assignment was to update and further develop price tracking tool from 2010. At first, it was updated a market share of radial agricultural tyres market in France according to their market sector (with the main focus on categories Standard 85, 70, and 65). Then, it was necessary to collect all available price lists of all major manufacturers of agricultural tyres in France. A range of products and prices of all dimensions of tyres were done for all categories which have higher than 0.5% market share in each category. One of the manufacturers (MICHELIN) was then used as a base for price comparison (with index value = 100). After that, it was calculated index values of other manufacturers. The price tracking tool is used for:

- i. To find out price levels of all agricultural tyre manufacturers in France
- ii. To compare price levels of premium brands, classic brands and lower-cost brands
- iii. To find out a price position of tyres manufactured by MITAS
- iv. To see attractiveness of price of tyres manufactured by MITAS among dealers of agricultural tyres in France.

4.3 Company profile

CGS HOLDING

CGS HOLDING is a dynamically developing holding company with a wide range of rubber products. The beginning of the CGS HOLDING dates back to the first half of the 1990s when it was known as BARUM HOLDING. The joint-stock company BARUM HOLDING gradually purchased shares in other rubber production and engineering companies, and in 1996 these formed CGS – Czech abbreviation of Česká gumárenská společnost (Czech Rubber Company). In 2006, BARUM HOLDING changed its name to CGS. In 2011, the concern was restructured and the company is currently called CGS HOLDING.

Today, CGS HOLDING is structured into two divisions; tyre division and technical rubber division. The technical rubber division is represented by companies RUBENA and SAVATECH. The main activity of CGS HOLDING and the core tyre division is represented by MITAS.

(CGS HOLDING Annual Report, 2014)

In November 2015, CGS HOLDING was bought by TRELLEBORG GROUP. This acquisition will be approved and put to practice earliest in June 2016.

MITAS

MITAS is a Czech-based manufacturer of off-road tyres (agricultural, industrial, motorcycle). MITAS currently operates three plants in the Czech Republic, one in Serbia and one in Charles City, Iowa, USA. MITAS has a presence in more than 140 countries around the world and has an extensive international sales and distribution network operating in 14 countries:

Europe – Austria, Czech Republic, Finland, France, Germany, Italy, Russia, Serbia, Spain, Switzerland, the Netherlands, the United Kingdom

North and South America – Mexico, USA

The history of MITAS dates to the 1930s when tyre production started in Prague and in Zlin in the Czech Republic. Originally, MITAS factories produced tyres and tuber for cars, motorcycles and bikes. The name MITAS has been used since 1947, originally formed from companies **MI**CHELIN and VERI**TAS**. Agricultural tyres became MITAS' core business activity in 2004 when MITAS acquired agricultural tyres division of CONTINENTAL A.G. MITAS today is one of the leading European producers of tyres for use in agriculture, construction and industry. One of four tractors and each second harvester in Europe leaves the production line fitted with MITAS-made tyres. MITAS manufactures and sells tyres under three brand names: the company's own brands MITAS and CULTOR, and CONTINENTAL under license.

(CGS HOLDING Annual Report, 2014)

4.3.1 CGS HOLDING board compositions

Composition of the Board of Directors

Composition of Board of Directors consists of current CEO and Chairman of CGS HOLDING Mr. Jaroslav Cechura, Andrew Mabin, Marketing and Sales Director at MITAS and Vice-Chairman of Board of Directors, and Josef Kremecek, Production Plant Manager in Zlin and Vice-Chairman of Board of Directors. The composition of Board of Directors is current as of the date of 31st December 2014. The composition may change in 2016 after acquisition of CGS HOLDING by TRELLEBORG GROUP.



Figure 11 CGS HOLDING Board of Directors, own processing

(CGS HOLDING Annual Report, 2014)

Composition of the Supervisory Board

Composition of the Supervisory Board consists of two current owners of CGS HOLDING, Tomas Nemec and Oldrich Slemr, who sold CGS HOLDING to TRELLEBORG GROUP in November 2015. The third member of the Supervisory Board is Mrs. Michaela Soukupova. The Supervisory Board is expected to change completely in 2016 due to new ownership of CGS HOLDING.



Figure 12 CGS HOLDING Supervisory Board, own processing

4.3.2 CGS HOLDING organizational structure

CGS Holding is structured into two divisions; a tyre division and a technical rubber division (see Appendix 1).

The technical rubber division is represented by companies RUBENA and SAVATECH. RUBENA produces a wide range of various products from technical rubber. These include for instance scraper rings, cuffs, different types of rubber sealing, bushing, dusters etc. RUBENA also produces a wide portfolio of rubber-metal products and excels in rubbertextile products, large casing and tubes. SAVATECH specializes in production of rubber compounds, conveyor belts, rubber profiles, printing technology, products for environmental protection, tyres for motorcycles and scooters, and pressed rubber parts.

The main activity of CGS HOLDING and the core tyre division is represented by MITAS. MITAS produces agricultural tyres, industrial tyres, motorcycle tyres, truck tyres and other tyres (airplane, fork lift). Production programme of MITAS tyres is illustrated in Figure 13.

Production Programme

Agricultural tyres

tractor super volume (SVT) tractor radial drive tractor drive (x-ply) tractor row-crop implement radial implement (x-ply) implement traction tractor small tractor front bantam

Earthmoving tyres

excavator roller earthmover (large EM) grader skid steer tractor industrial

Multipurpose tyres (MPT)

Motorcycle tyres moped scooter highway enduro enduro FIM cross speedway trial kart

Fork lift tyres Truck tyres Aircraft tyres

Figure 13 Production programme of MITAS tyres (Central Procurement CGS, 2015)

The most important categories are tractor radial drive tyres which represent 56 % of agricultural tyres market in France. Tractor super volume (SVT) tyres, also known as Extra Large tyres, represent 3 % of agricultural tyres market in France and are developed for the highest power tractors. X-ply (also known in other languages as diagonal or Bias) are

specific by different production process then radial tyres and are used mostly to enhance stability (such as fork lifts). An interesting range of products are the airplane tyres which are not produced massively but they are produced on the original machines from 1930s.

CGS Holding's distribution of revenues are represented by MITAS which accounts for 63 % of all sales, followed by products made in SAVATECH (accounted for 20 % of all sales), and RUBENA accounting for 17 % of all sales, illustrated in Figure 14.



Figure 14 CGS HOLDING distribution of revenues (Central Procurement CGS, 2015)

(CENTRAL PROCUREMENT CGS, 2015)

4.3.3 CGS HOLDING in numbers

CGS HOLDING adheres to the principle of sustainable development, supports new technologies and responsible management of resources. It always puts emphasis on occupational health and safety of its employees. The company complies with strict code of conduct including responsible behaviour towards employees, customers, business partners and the public.

In terms of financial risks, CGS HOLDING is subject primarily to fluctuations of exchange rates due to export and import operations of individual companies of the concern. Natural balancing of exchange rate differences from expenses or revenues decreases these risks. This risk is also decreased by the strategic diversification of production. The outstanding open position is secured using financial tools with a time horizon for the following 12 to 24 months.

CGS Holding's revenues grew after acquisition of agricultural division of CONTINENTAL in 2004. Revenues of CGS HOLDING increased by more than 30 % and to 2008 CGS HOLDING held stable revenues. In 2009, the company was hit by economic crisis and lost more than 20 % of revenues. However, CGS HOLDING was able to react quickly and adopt new strategies to tackle post-crisis years, resulting in revenues over 500 mil. EUR in 2011 which were repeated in 2012. The best results were achieved in 2013 and 2014 when revenues reached more than 660 mil. EUR. Today, CGS HOLDING is the most profitable in the history of its operations. Figure 15 presents revenues of CGS HOLDING.



Revenues of CGS Holding

CGS HOLDING's sales are presented in more than 140 countries all over the world. The most sales are held in the Western Europe which account for 53 % of all revenues of CGS HOLDING. The second most significant region is Eastern Europe accounting for 22 % of revenues, followed by Czech Republic with 12 %. In 2012, CGS HOLDING expanded to the United States of America which increased all revenues from the Americas to 9 %. Africa and Asia currently account for 3 % of all revenues of CGS HOLDING, however significance of these regions is the subject for future planning and development. Revenues by territory are presented in Figure 16.



Revenues by territory in 2014



Number of employees of CGS HOLDING grew significantly in 2005 after acquisition of agricultural division of CONTINENTAL in 2004. In 2005, CGS HOLDING had the highest number of employees in its history when the number reached more than 6500 employees. However, since then number of employees was slowly decreasing due to internal organisational changes and then dropped significantly in 2009 during the economic crisis. Due to quick response to the economic crisis, number of employees returned to the same amount in 2011 and dropped significantly again in 2012 due to further internal organisational changes. In 2013 and 2014, number of employees of CGS HOLDING increased and reached more than 6200 employees and is very close to its historical maximum in 2005. However, after acquisition of CGS HOLDING by TRELLEBORG GROUP, further organisational changes are expected as these two companies will merge together which will result in uncertain development of number of employees in future. Number of employees is presented in Figure 17.

(CENTRAL PROCUREMENT CGS, 2015)



Number of employees of CGS Holding

4.3.4 MITAS in numbers

In 2014, the tyre division reached positive business results despite the fact that the total annual sales in 2014 in the segment of agricultural and industrial tyres were lower than in 2013. Positive cash flow enabled the continuation of major investment projects.

After a solid start to the year 2014, the agricultural tyre market in Europe saw a slight decrease in the second half of the year. Tyre sales to original equipment manufacturers (OEM) registered a small decline throughout the year due to reduced machinery sales and production. Unlike North America and Russia, where there was a stagnation in machinery production, Europe saw modest growth. Despite the stagnation of agricultural tyres market generally, the market share position of MITAS remained stable.

The industrial tyre market development in 2014 was better than in 2013. West European markets grew almost 3 % compared to 2013, and Central and Eastern European markets

except Russia grew even stronger. The overall sales of MITAS in this segment were on a level similar to those in 2013 also due to an increase of the OTR tyre portfolio.

There was a very positive growth on the motorcycle tyre market and in sales of motorcycles. The European market increased compared to 2013, both in Western and Central Europe. Revenues by assortment in 2014 are presented in Figure 18.



Revenues by assortment in 2014

Figure 18 MITAS revenues by assortment in 2014, own processing

Sales grew rapidly in 2005 after acquisition of agricultural division of CONTINENTAL. Sales volume remained stable until 2009 when MITAS sales suffered from the economic crisis. Due to structural changes within MITAS, sales in 2010 reached pre-crisis level quickly. Since then, volume of sales exceeded 400 mil. EUR and this volume remains stable until today. Revenues of MITAS from 2004 to 2014 are presented in Figure 19.



Revenues of Mitas

While Europe remains the dominant market, accounting for more than 80 % of total sales, North and South America are at 10 %, Russia stabilised at 5 %, and ROW (Rest of the World – Asia, Africa, Others) at 5 %. Revenues by territory are illustrated in Figure 20.



Revenues by Territory in % in 2014

Figure 20 MITAS Revenues by territory in 2014, own processing

Year 2014 can be symbolised by the preparation of MITAS PREMIUM tyre range in OEM. MITAS tyres are replacing all CONTINENTAL branded tyres on new machinery produced by OEM as of January 2015. MITAS has negotiated deliveries of MITAS PREMIUM tyres to all key agricultural machinery manufacturers throughout 2014.

MITAS strategy is to build equity within a single brand, namely MITAS. The MITAS PREMIUM tyre line consists of rebranded CONTINENTAL tyres and new high technology products developed solely under the MITAS brand. MITAS has produced CONTINENTAL tyres since 2004 and will be producing agricultural tyres under the CONTINENTAL brand till the expiration of the licence agreement in 2019.

Number of employees of MITAS increased slightly in 2005 after acquisition of agricultural division of CONTINENTAL in 2004. Number of employees grew slightly every year and even during the global economic crisis there was no significant drop. Currently, Number of employees is at its maximum. After acquisition of MITAS by TRELLEBORG GROUP in November 2015, further organisational changes are expected, it is uncertain how it will be reflected on number of employees. Development is illustrated in Figure 21.



Number of employees of Mitas

Figure 21 Number of employees of MITAS, own processing

Another segment is structure of purchase of raw materials. Synthetic and natural rubber are the most basic raw materials purchased by MITAS for manufacturing of tyres, both account for 50 % of all raw materials purchased. Black Carbon is another main raw material which accounts for 16 % of purchases. Chemicals and textile cords accounts for 21 % of purchases. Structure of purchase of raw materials is more in details presented in Figure 22.



Figure 22 Structure of purchase of raw materials, own processing

(CENTRAL PROCUREMENT CGS, 2015)

4.4 Results

This section provides detailed information about market analysis and price analysis which were done during the internship in MITAS FRANCE. Both analyses reflect current trends in agricultural tyres market in France using the most recent available data.

4.4.1 Market analysis

Market analysis is used to provide detailed information about supply and demand of agricultural tyres in France. It is used for better understanding of French agricultural environment. Market analysis comprises of two parts. Firstly, it is analysis of different variables affecting supply and demand of agricultural in France. It covers detailed information about current situation of demand of tractors and its specifics, market share of tractor manufacturers and development of farm structures according to their total number and average size per hectare. Secondly, market analysis covers detailed information about agricultural tyres market itself, including market share of different categories of agricultural tyres, number of dealers of agricultural tyres in France and their volume of sales in 2014, and finally market share of agricultural tyres manufacturers in France.

4.4.1.1 Analysis of different variables affecting supply and demand of agricultural tyres in *France*

First part of market analysis includes variables that directly influence supply and demand of agricultural tyres in France. It covers number of registered new tractors in recent years in France, distribution of tractors according to Horsepower and their manufacturers. Secondly, it analyses farm structures in France, their number and average hectare size of farms in France and comparison on EU-27 level.

Number of registered new agricultural tractors

Number of registered new agricultural tractors directly impacts sales volumes of agricultural tyres. The number of registered tractors impacts sales of tyres in two ways:

- OEM (Original Equipment Manufacturer) is the first interest of MITAS. OEM means that a new tractor is mounted with MITAS tyres at the end of its production process. Currently, every fourth tractor in Europe and every second harvester is mounted with MITAS tyres. Number of registered tractors each year is therefore crucial as it reflects demand of tractors in France.
- 2) Secondly, it is also considered that a customer, who is buying a new tractor, has a possibility to select which tyres are mounted on new purchased tractor. Again, it is a major interest of MITAS that the customer purchases new tractor mounted with MITAS tyres. It can be illustrated on the following example: A customer buys a new tractor for 150 000 € and it is mounted with KLEBER tyres. A customer has a possibility to pay 250 € more to have a tractor mounted with MITAS tyres, or 750 € to have a tractor mounted with MICHELIN tyres. There is a competition between tyre manufacturers to convince a customer to select their tyres. It is the aim of MITAS to create the best offer and to attract customers to select MITAS tyres. Again, the amount of mounted tyres is directly influenced by the number of new registered tractors.

The results of number of registered new tractors in France is shown in Figure 23.



NUMBER OF REGISTERED NEW

Figure 23 Number of registered new agricultural tractors in France 2004-2014, own processing

In 2014, there was a significant drop in number of registered new tractors in France. Even though there was a significant drop between years 2013 and 2014, it is believed that the number of registered new tractors is fluctuating constantly between 24 000 and 36 000 thousands. There was an expectation that there will be a decrease in number of registered tractors in 2014 after a very positive result in 2013, however it was expected to drop slightly. There is no general cause of this significant drop. It is believed that it is due to successful year 2013.

Number of registered new agricultural tractors according to Horsepower (hp)

Number of registered new tractors according to their Horsepower (hp) is another variable which is very important for a tyre manufacturer. Different Horsepower requires different properties of tyres. Tractors with higher Horsepower requires tyres with higher properties during farming procedures as well as while driving on the road. This variable is very important for MITAS to adapt its range of tyres and to predict future demand. New development of tractors also influences research and development of new agricultural tyres.

To illustrate a development of registered new tractors according to their Horsepower, it was compared data from 2008, 2013 and 2014. The particular interest focuses in which categories there were a significant drops between 2013 and 2014. Data from 2008 are shown in Figure 24.

Number of registered new tractors according to Horsepower (hp) in 2008										
Horsepower	Market share 2008	Volume in 2008 (unites)								
less than 60 hp	14.11%	6159								
from 60 to 79 hp	6.44%	2812								
from 80 to 99 hp	17.46%	7623								
from 100 to 119 hp	19.93%	8702								
from 120 to 149 hp	17.95%	7836								
from 150 to 179 hp	10.70%	4670								
more than 180 hp	13.41%	5859								
Total standard tractors	100.00%	43661								

Figure 24 Number of registered new tractors according to Horsepower (hp) in 2008, own processing

Important finding is that the share of tractors below 60 hp is 14.11%. This number was decreasing in recent years.

Another figure presents number of registered new tractors in 2013 and 2014. The searching focused on categories in which the significant drop from 2013 to 2014 occurred the most. Results are presented in Figure 25.

Number of registered new tractors according to Horsepower (hp)										
Horsenower	Market share	Volume	Volume	Change from 2013						
Horsepower	2014	2014	2013	to 2014						
less than 49 hp	1.38%	400	450	-11.11%						
from 50 to 99 hp	14.16%	4094	6531	-37.31%						
from 100 to 149 hp	37.62%	10875	14821	-26.62%						
from 150 to 199 hp	19.24%	5562	8170	-31.92%						
from 200 to 249 hp	9.60%	2776	3446	-19.44%						
from 250 to 299 hp	2.21%	640	627	2.07%						
more than 300 hp	1.81%	522	479	8.98%						
Total standard tractors	86.02%	24869	34524	-27.97%						

Figure 25 Number of registered new tractors according to Horsepower 2013-2014 (hp), own processing

Results are showing significant decrease of registered new tractors in the main categories from 50 to 199 Horsepower, representing 71% of all registered tractors. However new trends can be observed:

- i. Number of tractors with less than 49 Horsepower is decreasing every year.
- ii. Number of tractors with more than 250 Horsepower is slowly increasing every year.

Such information is valuable for a tyre manufacturer as it can predict future development of registered new tractors, thus modify its range of products and its research and development activities.

Comparing the average Horsepower of registered new tractors between 2008 and 2014, there is an interesting result of increase from 120 average Horsepower in 2008 to 140 Horsepower in 2014. This trend is expected to continue and in the future there will be more registered new tractors with more than 250 Horsepower. The total percentage of standard tractors is equal to 86.02 % as the rest of 13.98 %, representing other groups of tractors not directly used for agriculture, were not included in the analysis.

Market share of tractor manufacturers

Market share of tractor manufacturers is another variable that influences agricultural tyres market, more specifically a presence of MITAS tyres mounted on a new tractor (OEM) or additional price for a customer if he or she decides to have a tractor mounted with MITAS tyres. Tractor manufacturers are thus business partners of MITAS who sell tractors that are mounted with MITAS tyres, or these manufacturers also exhibit their tractors mounted with MITAS tyres during special events like the biggest agricultural exposition AGRITECHNICA organised in Germany, or Innov-Agri in France. Development of market share of tractor manufacturers in recent years is presented in Figure 26.

Market share of tractor manufacturers in % in France 2006-2014											
Brand	2006	2007	2008	2009	2010	2011	2012	2013	2014		
John Deere	19.9	20.8	19.4	19.4	20.1	20.2	20.5	20.1	18.4		
New Holland	16.1	16.8	18.9	15.3	17.3	17.3	17.9	17	16.8		
Massey-Ferguson	11.5	12.2	10.3	10.2	9.1	10.4	10.1	11	11.2		
Claas	16.6	14.2	13.5	15.1	12	13.2	12	12.5	10.9		
Fendt	7.6	7.7	8.1	7.9	8.1	8.6	8.2	9.6	10.7		
Case IH	6.4	6.6	9.3	9.4	9.7	9.1	9.6	10.1	9.4		
Kubota	0	0	1.2	3.5	3.5	3.5	3.8	3.9	6.5		
Valtra	6.5	6	5.2	5.6	5.6	5.5	5.1	5	5.5		
Deutz-Fahr	5.1	6.8	6.1	6.7	6.4	5.5	5.8	5.1	5.3		
Same + Lamborghini	5.1	4.4	2.9	2.7	2.7	2.7	2.6	2.5	2.8		
McCormick	3.8	3.9	2.1	2.1	2	1.8	1.9	1.7	1.2		
Landini	1.5	1.6	1.3	1.1	1.4	1.5	1.5	1.2	1.1		

Figure 26 Market share of tractor manufacturers in France 2006-2014, own processing

Dominant position of JOHN DEERE and NEW HOLLAND remains stable, while CLASS is losing its market share every year. On the other hand, presence of FENDT on the French market is increasing constantly. KUBOTA had a successful year 2014 when their presence on French market has been almost doubled in comparison with previous years. Development of market share of tractor manufacturers is an interesting indicator for MITAS. The presence of tractor manufacturers is directly related to presence of MITAS tyres mounted on new tractors on the French market.

Number of agricultural farms and average size in Hectares (ha)

Number of agricultural farms and its average size is an indicator that creates demand on the French market, thus influencing supply of agricultural tyres. Its development is presented in Figure 27.



Figure 27 Number of agricultural farms and average size in Hectares (ha) in France, own processing

A decreasing trend of number of agricultural farms is mainly due to collapse of small farms with few Hectares due to low competitiveness with large agricultural producers. If such trend will continue, in future there will be only few tens of producers operating on large farm size with more than 100 Hectares. According to the author, it is a negative development, the emerging agricultural oligopoly will not create a fair competitive market and in future it will change demand as only few hundreds or tens of producers will be selecting machinery mounted with agricultural tyres.

Average size of farms in 2007 and 2010 of the European Union countries

Similar trend of decreasing number of agricultural farms can be seen also in the European Union. EUROSTAT published European statistics in 2007 and 2010. Their study highlights average size of farms in the EU-27. Development between 2007 and 2010 is shown in Figure 28.



Average size of farms in EU-27 in 2007 and 2010

The most significant increase of average size of farms is in the Czech Republic, Slovakia and the United Kingdom. For a comparison, in France there is about 300,000 agricultural farms while in the Czech Republic, the land is currently owned and operated by 22 subjects. As previously mentioned, it leads to oligopoly on the European market which in my opinion will change demand for agricultural machinery, including agricultural tyres mounted on them. It is both opportunity and threat at the same time. Future development should be nevertheless observed and MITAS should find an opportunity in current development and use it to its advantage.

Figure 28 Average size of farms in EU-27 in 2007 and 2010, own processing

4.4.1.2 Analysis of agricultural tyres market in France

Having analysed variables that are influencing French market of agricultural tyres, it was decided to focus on agricultural tyres market. The main objective is to understand how French market is working, who are clients of MITAS and how are tyres distributed in France. The interest was also to observe which agricultural tyres are being sold the most and what is the market share of manufacturers of agricultural tyres in France.

Volume of market according to categories of tyres

Volume of sales of agricultural and industrial tyres in 2014 in France showed dominant proportion of agricultural radial tyres. Approximately 60 % are represented by agricultural radial tyres (Standard Radial 85, Radial 70, Radial 65, Large volumes), shown in Figure 29. During the internship, the main focus was on sales and price comparison of agricultural radial tyres, which is more in details presented in price analysis chapter.



Figure 29 Volume of market according to categories of tyres in 2014, own processing

Number of agricultural radial tyres according to volume sold by dealers

Analysis of number of agricultural radial tyres gives us an idea how dealers' network is working in France. In Figure 30 it is observed distribution of dealers selling agricultural tyres and also the number of agencies in France.



Figure 30 Number of agricultural radial tyres sold by dealers in France, own processing

However these agencies are backed by dealers, they operate as individual stores of tyres which sell tyres and provide other services related to tyres. Due to their independence, business is done individually which requires more personal approach. Main tyre dealers operating in France are:

- BestDrive, sold 22000 agricultural tyres in 224 agencies, owned by CONTINENTAL
- Euromaster, sold 24000 agricultural tyres in 260 agencies, owned by MICHELIN
- Profil +, sold 26000 agricultural tyres in 280 agencies
- ▶ First Stop, sold 9000 agricultural tyres in 130 agencies, owned by BRIDGESTONE

Ownership of these dealers also influences volume of agricultural tyres brands sold by each dealer.

Market share of agricultural radial tyres

Having analysed number of agricultural radial tyres sold by different dealers in France, the next variable is the market share of manufacturers of agricultural radial tyres. Results are presented in Figure 31.



Figure 31 Market share of agricultural radial tyres in France in 2014, own processing

France is known as a domestic market of MICHELIN which is playing the key role in agricultural tyre business. MICHELIN and its own brand KLEBER comprises of more than 33 % of the French market. Position of MICHELIN is so dominating that its price politics and business strategy directly influences behaviour of other manufacturers in France. Presence of MICHELIN is notably seen not also in Figure 31 but also in the stores of tyre dealers and in the field mounted on tractors. MICHELIN is a well-known brand with long history and with great reputation and brand awareness. Selling agricultural tyres on MICHELIN domestic market is therefore a challenge for tyre manufacturers to keep up and grow in France.

Other agricultural manufacturers with strong presence are TRELLEBORG, FIRESTONE and BKT. MITAS together with its own brand CULTOR and licensed CONTINENTAL comprises for 12 % of French agricultural radial tyres market.

4.4.2 Price analysis

Price analysis was done using price tracking tool which was developed to track price levels of all agricultural tyre manufacturers in France. The main objective was to collect current price lists of all manufacturers and create an index-based measurement of price level and attractiveness for customers and dealers. This tool gathers 14 manufacturers of agricultural tyres in France.

The main focus was onto tyre categories Standard Radial 85, Radial 70 and Radial 65 as they represent more than 55 % of agricultural tyre market in France. How price tracking tool was developed is presented in Figure 32.

				MICHELIN	TRELLEBORG	Kleber	MINENTY	SniDGESTONE Firestone	VREDESTEIN	Mitas
	1			BF N°26	BF N°18 AU	BF N°26	BF N°6 AU	BF n° 30 AU	BF 1/2015 AU	BF N° 7 AU
				01/10/2015	01/07/2015	01/10/2015	01/01/2015	01/01/15	01/01/15	01/01/15
Dimension										
Standard Radial 85	Volume	Share in category	Market share	AGRIBIB	TM300 / TM600	TRAKER	AC 85	PERFORMER	TRAXION 85	RD 01
340/85 R 24	5772	8,3%	3,5%	742,00 €	733,00 €	613,00€	522,00€	551,00€	665,00€	514,00 €
340/85 R 28	4853	7,0%	2,9%	864,00 €	815,00 €	713,00€	611,00€	629,00€	757,00€	570,00€
420/85 R 34	4602	6,6%	2,8%	1 432,00 €	1 323,00 €	1 174,00 €	974,00 €	1 036,00 €	1 239,00 €	886,00€
380/85 R 28	4279	6,2%	2,6%	917,00 €	902,00 €	760,00 €	680,00€	685,00€	831,00€	661,00€
460/85 R 38	3999	5,8%	2,4%	1 768,00 €	1 893,00€	1 463,00 €	1 381,00€	1 391,00 €	1 706,00 €	1 164,00 €
420/85 R 38	3329	4,8%	2,0%	1 607,00 €	1 505,00 €	1 316,00 €	1 118,00 €	1 188,00 €	1 410,00 €	967,00€
420/85 R 28	3141	4,5%	1,9%	1 064,00 €	1 171,00 €	882,00 €	852,00 €	866,00 €	1 074,00 €	768,00 €
520/85 R 38	2618	3,8%	1,6%	2 380,00 €	2 476,00 €	2 004,00 €	1 831,00 €	1 828,00 €	2 302,00 €	1 573,00 €
380/85 R 24	2342	3,4%	1,4%	881,00€	843,00 €	728,00€	642,00 €	649,00 €	780,00€	585,00€
420/85 R 24	1927	2,8%	1,2%	977,00€	1 075,00 €	809,00€	806,00€	784,00€	990,00€	725,00€
280/85 R 24	1686	2,4%	1,0%	555,00 €	557,00 €	459,00 €	411,00€	415,00 €	499,00 €	399,00 €
320/85 R 28	1634	2,4%	1,0%	714,00 €	691,00€	591,00€	517,00 €	519,00 €	626,00€	483,00 €
320/85 R 24	1593	2,3%	1,0%	650,00€	638,00€	537,00€	482,00€	483,00€	582,00€	484,00 €
420/85 R 30	1348	1,9%	0,8%	1 184,00 €	1 260,00 €	980,00€	929,00€	932,00€	1 176,00 €	834,00 €
280/85 R 28	1191	1,7%	0,7%		616,00 €	570,00€	459,00 €	451,00€		436,00 €
460/85 R 34	700	1,0%	0,4%	1 623,00 €	1 682,00 €	1 343,00 €	1 298,00 €	1 275,00 €	1 589,00 €	1 055,00 €
340/85 R 38	689	1,0%	0,4%	1 023,00 €	992,00€	847,00€	768,00€	762,00€	945,00€	731,00€
520/85 R 42	600	0,9%	0,4%	3 075,00 €	3 188,00 €	2 518,00 €	2 333,00 €	2 234,00 €	2 792,00 €	1 913,00 €
320/85 R 32	589	0,8%	0,4%			664,00€				565,00€
320/85 R 20	513	0,7%	0,3%		620,00€	488,00€				
340/85 R 36	488	0,7%	0,3%		854,00 €	751,00€	716,00€	685,00€		675,00 €
320/85 R 36	430	0,6%	0,3%	829,00€	858,00€	684,00 €		579,00€		
380/85 R 30	420	0,6%	0,3%	1 055,00 €	1 155,00 €	865,00€	863,00€	848,00 €		715,00€
250/85 R 24	314	0,5%	0,2%	463,00€	466,00€	384,00€		335,00€		
Total standard	49057	70,6%	29,7%							

Figure 32 Price tracking tool example, own processing

Prices of agricultural tyres are compared for each category (Standard Radial 85, Radial 70 and Radial 65). In this example, Standard Radial 85 tyres is a dimension with the largest market share of agricultural tyres in France. It is sorted by different profiles of tyres (i.e.

340/85 R 24) according to their volume, share in category and total market share. In this case, tyre 340/85 R 24 represents 3.5 % of agricultural tyre market, 8.3 % share in the category Standard Radial 85 and total volume of sales in 2014 equals to 5772 units. It was decided to analyse all dimensions which have more than 0.5% share in each category. Then, it was necessary to collect all prices from current price lists of all manufacturers. After that, current prices were observed for all analysed dimensions. Range of products offered by different manufacturers is also included in the computation. These two criteria were put together which created a price index.

MICHELIN, as the strongest manufacturer in France, is selected as a base for price index (price index = 100). Price index then compares average price levels of all analysed dimensions and also includes whether that dimension is or is not produced/offered by a manufacturer.

Agricultural radial tyres and their manufactures are being divided into three groups:

- I. **Premium tyres** premium quality is represented by MICHELIN, KLEBER, CONTINENTAL and TRELLEBBORG
- II. **Classic tyres** under premium quality there is a classic tyre represented by FIRESTONE, VREDESTEIN, BKT and MITAS.
- III. Lower-cost tyres lower cost tyres are tyres sold at low cost and are usually produced by premium and classic tyres manufacturers. This category is represented by TAURUS, MAXIMO, ALLIANCE, CULTOR, PETLAS and STARMAX.

Price indexes were compared for each category of agricultural tyres and all values were discussed and compared for each group of manufacturers of agricultural tyres. Results of price index for Standard Radial 85 category are presented in Figure 33.


Price index Standard Radial 85

Figure 33 Price index Standard Radial 85, own processing

In the first group of agricultural tyre manufacturers – Premium tyres – price indexes of MICHELIN and TRELLEBORG are very close to each other. Both manufacturers offer very wide range of Radial 85 tyres with the highest prices on French market. However KLEBER, second premium brand of MICHELIN, has the highest market share; 20 % in volume of sales in France, has price index 80.93 which means that KLEBER has very high price attractiveness for clients and dealers in France. KLEBER tyres also offer wide range of products in France. On the other hand, CONTINENTAL tyres, produced by MITAS, are also considered as premium brand of tyres. CONTINENTAL with price index 73.65 also offers wide range of Radial 85 tyres but with lower prices than MICHELIN, TRELLEBORG and KLEBER tyres.

In the second group – Classic tyres – VREDESTEIN has high price index value 93.02 but it is due to its high prices, and its offered range of Radial 85 tyres is lower than other competitors in Classic tyres group. VREDESTEIN is considered as highly-priced classic tyre brand. FIRESTONE and BKT with their values 74.47 and 73.62 are very close to each other in their price level and range of Radial 85 tyres offered. MITAS with its value 66.05

is the same case as CONTINENTAL in Premium tyre group. MITAS offers wide range of Radial 85 tyres but with lower prices.

In the third group – Lower-cost tyres – CULTOR tyres, produced by MITAS, are very well positioned. CULTOR offers wide range of Radial 85 tyres for attractive prices and in comparison with other manufacturers has very good price index value 56.62. MAXIMO tyres has the highest price index 65.58 but MAXIMO has higher prices and offers smaller range of Radial 85 tyres than CULTOR. MAXIMO is produced by TRELLEBORG which explains higher price strategy. However in comparison to other manufacturers in Lower-cost tyres, it can be considered as over-priced.

In the second tyre category – Radial 70 – similar results can be observed in Figure 34.



Price index Radial 70

Figure 34 Price index Radial 70, own processing

MICHELIN and TRELLEBORG are very close to each other with its prices and range of Radial 70 tyres offered in France. KLEBER as dominating brand of agricultural tyres has 81.91 price index, offers wide range of Radial 70 tyres and is price attractive and brand number one in France. CONTINENTAL has also the same position as in Radial 85 category. CONTINENTAL with its price index 76.66 is the cheapest Premium tyre brand which offers prices very close to Classic tyre group. In Classic tyre group, VREDESTEIN again dominates with price index 97.45 but again, VREDESTEIN offers Radial 70 tyres for high prices and does not offer so wide range of Radial 70 tyres as its competitors. MITAS is not very good positioned in Radial 70 category as it has price index only 60.87 and is very close Lower-cost tyre group. MITAS offers very wide range of Radial 70 tyres for lower prices than its competitors in Classic tyre group.

In the Lower-cost tyre group, CULTOR is again well-positioned compared to its competitors. CULTOR does not offer very wide range of Radial 70 tyres but price attractiveness of Radial 70 tyres is very high. MAXIMO offers approximately the same range of Radial 70 tyres as CULTOR but for significantly higher prices in some dimensions which results in even higher price index position than MITAS. But MAXIMO offers significantly smaller range of Radial 70 tyres than MITAS, making MITAS and CULTOR tyres more price attractive to customers and dealers.

In the last category analysed – Radial 65 tyres – it shows interesting results which are different from Radial 80 and Radial 70 tyres categories. Results are shown in Figure 35.



Price index Radial 65

Figure 35 Price index Radial 65, own processing

In the Premium tyres group, all manufacturers has the same range of products as all of them produce all dimensions of Radial 65 that were analysed. All results are therefore purely subject of price comparison. TRELLEBORG has the highest price index 107.21 followed by MICHELIN, KLEBER and CONTINENTAL. There is an interesting observation when TRELLEBORG and MICHELIN range of products matches, TRELLEBORG seems to have higher price index. KLEBER and CONTINENTAL are maintaining their price position, CONTINENTAL being again closer to Classic tyre group.

In the Classic tyres group, all tyre manufacturers has also the same range of products and it is also purely a price comparison. VREDESTEIN keeps its highly-priced position, FIRESTONE is even being ahead of CONTINENTAL tyres from Premium tyres group brands. MITAS has slightly higher index than in previous categories (68.45) and has better position among Radial 65 then in Radial 85 and 70.

In the Lower-cost tyres group, CULTOR has dominant position as it offers wider range of Radial 65 tyres than its competitors. MAXIMO does not offer any Radial 65 tyres so its price index value is 0. However CULTOR has price index value very close to MITAS price index value.

Putting all three categories (Standard Radial 85, Radial 70, and Radial 60) together, the total price index confirms the price position and the price attractiveness of brands as shown in Figure 36.



Price index total (Radial 85,70,65)

Figure 36 Price index total, own processing

In the Premium tyres group, MICHELIN figures with the base value of 100 from which results of other manufacturers are derived. TRELLEBORG with its value of 99.20 is right behind MICHELIN, followed by KLEBER with index value of 82.45, and finally CONTINENTAL with index value 75.74. Both KLEBER and CONTINENTAL have a gap in price level, compared to MICHELIN, KLEBER is losing more than 17 and CONTINENTAL more than 24 index values.

In the Classic tyres group, VREDESTEIN resulted with very high value of 95.60, followed by FIRESTONE (76.41), and BKT (73.31), and MITAS with 64.22. Classic tyres group represents different manufacturers with different price levels and range of products offered on the French market. Results of price indexes shows diversified group of tyres.

In the Lower-cost tyres group, results of total values of price indexes tend to be concentrated around the value 55. MAXIMO reached highest value of 63.49 but it is not presented in price index of Radial 65 tyres. CULTOR is positioned with value of 58.98, followed by TAURUS (55.39), PETLAS (54.40), ALLIANCE (53.14) and STARMAX (51.76).

Price analysis also measures sell-in prices after sell in discount. Such platform is useful for tracking price attractiveness among dealers and clients. It requires a market knowledge to analyse sell in discounts offered by manufacturers to their clients. Such discount rate varies between 42 % and 57 %. As this precise rates are confidential for each manufacturer, this analyses is based only on estimation of offered discount rates provided by agricultural tyre sales managers based on their observations, experience and estimates. Results of sell-in price analysis are presented in Figure 37.





Sell-in prices analysis discovered MICHELIN being the strongest and the most expensive brands to purchase by dealers and clients who has the possibility to purchase tyres for sell-in prices. TRELLEBORG (74.84) and KLEBER (74.35) are very close to each other regarding sell-in prices, both losing more than 25 price index values from MICHELIN. CONTINENTAL with its value 64.85 is at the bottom of Premium tyres brands, having the reputation of the cheapest premium brand when described in sell-in prices.

Classic tyres group confirmed over-priced tyres provided by VREDESTEIN (72.12) as their sell-in price index is close to TRELLEBORG and KLEBER in the Premium tyres group. MITAS with its value 54.97 is the cheapest Classic tyre brand behind FIRESTONE (57.64) and BKT (60.45).

Lower-cost tyres group resulted in very competing results. MAXIMO is missing its Radial 65 dimensions, so its results are consisted of Standard Radial 85 and Radial 70. CULTOR tyres are positioned among other lower-cost tyres brands ALLIANCE and PETLAS within price index range of 50 to 52.

5 Discussion and recommendations

5.1 Market analysis

Number of new registered tractors in France is determinant of supply and demand of agricultural tyres. It is very important for OEM (Original Equipment Manufacturer), in other words a presence of selected brand of agricultural tyres mounted on a brand new tractor that has just left a production line. Together with provided data of market share of tractor manufacturers, it is up to MITAS to negotiate the presence of CONTINENTAL, MITAS, and CULTOR tyres on brand new tractors. This presence is also important for any expositions of tractors where a final customer has a chance to see tractors and other machinery mounted with tyres manufactured by MITAS. Final customer has also a possibility to select which tyres will be mounted on a new tractor that he or she has just purchased. MITAS has to target these tyres selections and provide interesting price offers to compete with competitors. Also MITAS needs to be up to date with current strategies of its competitors.

Increasing Horsepower of tractors in France is a great opportunity for MITAS. Keeping up with technological development is important, and MITAS needs to innovate current products and launch new tyres for new developed tractors. Technological demands of tractors are increasing every year, so technology of tyres needs to keep up. Research and development activities together with cooperation with tractor manufacturers will be essential for MITAS in the future. There should be considered a foundation of an alliance with a tractor manufacturer as it is common in car industry. Good partnership is an opportunity for MITAS to strengthen its position on the French market.

A trend of decreasing number of farms in France is a threat and also an opportunity for MITAS to the future. If current trends continue, there will be lower number of farm owners and average hectare size of each owner will increase. It may change demand of agricultural tyres in France in the future as few hundreds owners of farms will select a tyre manufacturer for their machinery, possibly for their whole concern. If MITAS is to be selected in the future, it needs to increase a brand awareness in France, and create and further develop strong ties with dealers of agricultural tyres and provide high quality services to final customers.

Otherwise, MITAS can face a decrease in market share in France and competitors will outrun weak spots of MITAS.

Current presence of tyre dealers in France provides stable background for a tyre manufacturer. However main dealers originally belong to an agricultural tyre manufacturer. As Best Drive is owned by CONTINENTAL, MITAS faces a challenge with launching MITAS PREMIUM products which replace CONTINENTAL agricultural tyres. As MITAS has purchased a license from CONTINENTAL to manufacture agricultural tyres under CONTINENTAL brand, changing it to MITAS PREMIUM may resolve in lower support of Best Drive to promote them. Even though there are strong ties between MITAS and Best Drive, the dealer may not be willing to sell MITAS PREMIUM tyres for the same price as CONTINENTAL.

5.2 Price analysis

This part provides further comments of the author to the results of price analysis of CONTINENTAL, MITAS, and CULTOR tyres. These comments were also given by the author to the representatives of MITAS.

Position of CONTINENTAL in Standard Radial 85 should be more competitive with other brands. CONTINENTAL should increase its price position among Premium tyres manufacturers. It may be considered as price attractive but its values are closer to the second group of agricultural tyre manufacturers - Classic tyres. Also in Radial 70 and Radial 65 categories, CONTINENTAL should be more competitive, increase its price index and distinguish more from Classic tyre group. CONTINENTAL tyres are completely replaced by MITAS PREMIUM tyres from January 2016 and price level will remain the same. The upcoming challenge for MITAS PREMIUM is to be more competitive in Premium tyres group and distinguish more from Classic tyres group by enhancing brand reputation among clients and dealers. MITAS PREMIUM tyres for the same price as CONTINENTAL due to lower brand awareness among final customers. It would be a good idea if MITAS invites representatives of dealers and the best customers to visit production facilities, show them the

production process in which MITAS should deliver the message that MITAS PREMIUM and CONTINENTAL tyres have completely the same characteristics and quality and that it is just a name that is changing.

In the Classic tyres group, position of MITAS seems to be considered as price attractive but with its values MITAS is very close to the third group of agricultural tyres – Lower-cost tyres. The price position of MITAS is yet to be strengthened in the Classic tyres group, making it more competitive by increasing prices while increasing brand recognition in France. MITAS tyres should not be considered as Lower-cost tyre group by its clients and dealers in future. MITAS tyres should be distinguished more in all categories of radial tyres. Currently, MITAS tyres in France suffer from low brand recognition; low knowledge of final customers about its characteristics and qualities. It is also not very known among customers that MITAS also produces CONTINENTAL and CULTOR tyres.

CONTINENTAL and MITAS tyres are on one hand the cheapest in their categories, but on the other hand its price attractiveness for customers can sometimes be seen negatively.

In the third category of agricultural tyres – Lower cost tyres - CULTOR is very wellpositioned among other lower-tyres group brands, its price position and price attractiveness for customers is great. CULTOR should increase brand awareness on the French market, more customers should be aware of CULTOR brand and that it is produced by MITAS. Higher marketing attention should be put to CULTOR as it has potential to grow on the French market.

Considering sell-in price attractiveness for clients and dealers, it depends on the price set by the manufacturer, and on sell in rates for clients and dealers. Sell in rates values are only estimates and may change according to different strategies of tyres manufacturers. For CONTINENTAL and MITAS tyres, better sell-in price position can be accomplished by changing the prices of CONTINENTAL and MITAS tyres on the French market, or by negotiating better sell in rates with dealers to match better with competitors in each tyres group. CULTOR has a good price position among other brands in the Lower-cost tyres group.

5.3 Learning experience

The author have spent twelve months in France during which it has been gained nine months experience of studying in Grenoble and three and a half months working experience in Dijon. During the stay in Grenoble, the author saw some prejudices about French environment before starting the internship in MITAS in Dijon. French environment seemed to be indecisive, slow and time-consuming while dealing with administrative obligations. Patience has been learned while dealing with French offices or visiting stores in France. Before start of the internship, there were concerns that the same indecisive working environment will be entered. But these concerns were not met and French working environment proved all these prejudices wrong.

5.3.1 Relationships within a company

As a Czech citizen, there were found many interesting mutual habits. It is perceived by the author that Czech business culture is similar to German business culture; it is overwhelmed with formalities. Company-client relationship tends to be more formal with very formal communication and it is perceived that trust is based on following and respecting the details of each deal; happy Czech businessman is a person holding signed contract that determines how is business done with a client. Other differences were spotted when a company wants to hire a new employee. In the Czech Republic, the author finds these meetings too formal. In France, there is a very friendly environment full of friendly conversation and not too many formalities.

Another positive experience gained in France is natural respect of superior position of a director. In Czech culture, superiority is sometimes stressed in working environments which creates less friendly atmosphere in a company. In France, the author was very satisfied with a friendly atmosphere in an open space office. Superior positions were naturally respected and relationships between people tended to be friendly and informal. It was found very satisfying and it felt more productive in these working environments where people share almost everything with each other.

A patience of colleagues was also appreciated as author's French language is on average level and there were no problems with explanations when there was a struggle.

5.3.2 Personal development during the internship

As a foreigner in France, the author found himself struggling with communication due to lower knowledge of French language. When dealing with a task, it was realised having more problems with the understanding of what to do. It was refused to talk in English so it was asked more questions in order to get the right understanding of tasks. The author slowly gained confidence in speaking French which made communication at work much easier.

Secondly, it was found out that author's knowledge of Microsoft Excel matches needs of MITAS France. It was further developed a price tracking tool using functions that there has already been used during author's studies. These capabilities have been further improved while doing more price analyses.

The author gained an understanding of French agricultural tyres market as he met with dealers of agricultural tyres during his business trips. He has participated on meetings with dealers such as Euromaster, Profil+ and Point S. There was an opportunity to participate on agricultural exposition Innov-Agri in Ondes, France South-West, where other dealers and also clients from different corners of France were met. These clients explained that even though a young generation is very technology-oriented, business in France will always be based on personal contact, relationships and trust.

5.3.3 Propositions for personal development

Even though communication issues were solved, it was found out that lack of knowledge about French agricultural tyres market and tyres itself at the beginning of the internship were crucial. It was spent two weeks studying tyre profiles and manufacturing processes. Three manufacturing facilities were visited during the business trip to the Czech Republic. But when the author was dealing with marketing tasks of how to improve certain sales offers, due to lack of knowledge of French market it was difficult to make them more attractive. Next time given tasks should be rescheduled as internship should have started with market analysis, not with price analysis as it happened. It was spent four weeks working with tyre dimensions and price lists. Understanding of French market of agricultural tyres would have made beginnings and first tasks easier.

The author was also more interested in marketing strategies of agricultural tyres. Unfortunately, there is no marketing coordinator in MITAS France. There was a cooperation with marketing staff in Prague, mainly dealing with social media and online presentation of MITAS. It was also visited the marketing department in Prague headquarters. Unfortunately, during such short time it was not possible to get more insight into marketing strategies of MITAS.

5.3.4 Link between academic training and the real life experience in MITAS

It was spent one year in Grenoble Ecole de Management doing a Double programme. University taught author to get analytical skills; the ability to visualize, articulate, and solve problems by making decisions that are sensible given the available information. These skills include mainly ability to apply logical thinking to gathering and analysing information, as well as designing solutions and formulating strategies.

Probably the most valuable acquired skill from the university is the ability to search for information, process them into data and check their reliability.

Economic teachings from the home university Czech University of Life Sciences together with managerial teachings from Grenoble Ecole de Management made the author capable of

doing market and price analyses. Particularly, academic training of Econometrics, Statistics and Advanced Decision Techniques taught the author to create a model situation, search for dependent and independent variables, followed by gathering of information which are further processed as data to test the created model, followed by interpretation of results.

Another area of gained skills is knowledge of e-commerce, online advertising and use of social media for business. These skills were applied on many projects during studies as well as during the internship. The most used tools are SEO web optimization, use of Facebook company profiles, Google Analytics and advertising.

6 Conclusion

The market analysis of was done in order to understand agricultural tyres market in France. It was necessary find out variables influencing the French market and then to search for available and the most recent data. These data were then further processed and compared internally with previous market analysis done in 2009. Results confirmed existing trends in agricultural tyres market in France. Fluctuating trend in number of new registered tractors was confirmed when in 2013 it was registered one the highest number of 37,965 tractors in last ten years, followed by one of the lowest number of registered tractors in last ten years of 28,443 tractors in 2014. Increasing average Horsepower of standard tractors in France was confirmed; there were 38.01% of standard tractors with less than 100 Horsepower in 2008. In 2014, proportion of standard tractors with less than 100 Horsepower is 15.54%. Standard tractors with more than 150 Horsepower increased from 24.11% in 2008 to 32.86% in 2014. There is a changing market share of tractor manufacturers. JOHN DEERE keeps the higher market share of 18.4% of all tractors in France in 2014, followed by NEW HOLLAND (16.8%) and MASSEY-FERGUSON (11.2%). Market share of CLAAS tractors is decreasing; in 2008 CLAAS tractors accounted for 16.6% of market share, in 2014 the market share decreased continuously to 10.9%. On the other hand, FENDT tractors with market share of 7.6% in 2006 increased continuously to 10.7% in 2014, and KUBOTA entered market after year 2006 and in 2014 accounted for 6.5% of market share. There is a decreasing number of farm owners in France; in 2005 there were 545,000 farm owners with average size of farms equal to 50ha, in 2010 number of farm owners dropped to 326,000 with average size of 76ha.

Agricultural tyres market is evolving positively with dominance of sales of Radial agriculture tyres (60%). Tyres Dealer network has expanded, BEST DRIVE, EUROMASTER and PROFIL+ are keeping the superior positions among tyre dealers in France. Market share of radial agricultural tyres is still dominated by MICHELIN which owns more than 33% of the market. Its brands MICHELIN and KLEBER have strong market presence in France. MITAS, together with CONTINENTAL and CULTOR, accounts approximately for 12 % of market share of agricultural tyres in France.

Price analyses analysed comparison of price levels among manufacturers of agricultural tyres, focusing only on Radial tyres and their three most important categories; Standard Radial 85, Radial 70, and Radial 65. All brands of tyre manufacturers are compared to MICHELIN tyres which has a leading position on the French market. MICHELIN tyres serve as a base from which other brands of tyres are put into index. Prices were analysed in three different groups of tyres - Premium tyres, Classic tyres, and Lower-cost tyres. MITAS and its tyres are present in all three groups; CONTINENTAL represents a Premium tyre brand with index value of 75.44 compared to MICHELIN tyres. Price index of CONTINENTAL should increase to distance from Classic tyres brands to represent Premium quality. MITAS tyres are in the Classic tyre category with value of price index of 64.22. MITAS needs to increase brand awareness of MITAS tyres on the French market and also be more distant from Lower-cost tyres brands. CULTOR is very well-positioned among Lower-cost tyres brands. CULTOR accounts for 58.98 price index value. CULTOR relies on higher marketing promotion on the French market as it has high potential among Lowercost tyres manufacturers. Price analysis of agricultural tyres in France created an internal debate of sales managers in MITAS France. The price analysis document was provided to MITAS France so it can be further modified, enhanced and updated with current price lists of each manufacturer.

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8 Appendices



Appendix 1 Organizational structure of CGS HOLDING, own processing

Load index

ш	kg	u	kg	U	kg i	L.	kg	U	No.
30	105	67	307	104	900	141	2 575	178	7500
31	109	68	315	105	925	142	2 650	179	7750
32	112	69	325	106	950	143	2725	180	8000
33	115	70	335	107	975	144	2 800	181	8250
34	118	71	345	108	1 000	145	2 900	182	8500
35	121	72	355	109	1 030	146	3 000	183	8750
36	125	73	365	110	1 060	147	3 075	184	9000
37	128	74	375	111	1 090	148	3 150	185	9250
38	132	75	387	112	1 120	149	3 250	186	9500
39	136	76	400	113	1 150	150	3 350	187	9750
40	140	77	412	114	1 180	151	3 450	188	10000
41	145	78	425	115	1 215	152	3 550	189	10 300
42	150	79	437	116	1 250	153	3 650	190	10 600
43	155	80	450	117	1 285	154	3 750	191	10900
44	160	81	462	118	1 320	155	3 875	192	11200
45	165	82	475	119	1 360	156	4 000	193	11500
46	170	83	487	120	1 400	157	4 125	194	11800
47	175	84	500	121	1 450	158	4 250	195	12150
48	180	85	515	122	1 500	159	4 375	196	12500
49	185	86	530	123	1 550	160	4 500	197	12850
50	190	87	545	124	1 600	161	4625	198	13200
51	195	88	560	125	1 650	162	4 750	199	13600
52	200	89	580	126	1 700	163	4875	200	14000
53	206	90	600	127	1 750	164	5 000		
54	212	91	615	128	1 800	165	5 150		
55	218	92	630	129	1850	166	5 300		
56	224	93	650	130	1 900	167	5 450		
57	230	94	670	131	1950	168	5 600		
58	236	95	690	132	2 000	169	5 800		
59	243	96	710	133	2 060	170	6 000		
60	250	97	730	134	2 120	171	6 150		
61	257	98	750	135	2 180	172	6 300		
62	265	99	775	136	2 240	173	6 500		
63	272	100	800	137	2 300	174	6 700		
64	280	101	825	138	2 360	175	6 900		
65	290	102	850	139	2 430	176	7 100		
66	300	103	875	140	2 500	177	7 300		

Appendix 2 Load index of agricultural tyres (Mitas Technical Databook, 2016)



Appendix 3 MITAS logo (Central Procurement CGS, 2015)

