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INFORMATION ACCOUNTING SYSTEMS USING FOR THE NETWORK STRUCTURE OF SUPPLY AND PRODUCT CHANNELS OPTIMIZATION

Abstracts –The importance of the structure of supply chains and product distribution channels in the activities of enterprises is considered in the article, the advantages of using information systems of accounting are analyzed and the results of their influence on the formation of a new optimal supply chain structure is predicted.

The relationship of management processes within the enterprise with its marketing activity and the existing information accounting system is analyzed. Also, it is investigated in the article the importance of using marketing channels for the enterprises. The main marketing channel members' functions are considered in the article. The marketing channels' importance for the companies is stressed. The author considers what benefits the intermediary can offer to the company.

Key words: accounting systems, information systems, supply chain, marketing channels, marketing policy.

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ВИКОРИСТАННЯ ІНФОРМАЦІЙНИХ СИСТЕМ ОБЛІКУ В ОПТИМІЗАЦІЇ МЕРЕЖЕВОЇ СТРУКТУРИ ЛАНЦЮГІВ ПОСТАВОК ТА КАНАЛІВ ЗБУТУ ПРОДУКЦІЇ

В статті розглядається значення структури ланцюгів поставок та каналів збуту продукції в діяльності підприємств, проаналізовано переваги використання інформаційних систем обліку та прогнозовано результати їх впливу на формування нової оптимальної структури ланцюга поставок. Проаналізовано взаємозв'язок управлінських процесів всередині підприємства з його маркетинговою діяльністю та існуючою інформаційною системою обліку.

Ключові слова: системи обліку, інформаційні системи, ланцюг поставок, канали збуту, маркетингова політика.

Introduction. The strength of the company, as a rule, is a reflection of how well it is done. Many companies are facing with financial problems in today's economy. It obliges them to look for ways to improve competitiveness due to internal forces. So, in other words, their goal is to make its activity more efficiently. The improving of internal process includes the improvement of business process management and the level of workflows automating and streamlining. This can be achieved by two ways. The first one is to improving the results of work which involves the expanding of the services range; the quality improving of consumer products; the improving quality characteristics of raw material; the use of standardization, unification and normalization of the product. The second way includes the improvement of the labor means and technological processes. This direction is realized by the use of different know-how; the introduction of technical re-equipment; modernization and progressive changes in the technical level of the equipment (Harvard business review on measuring corporate performance, 1998). The positive dynamics of the organization development and the intensification of internal processes are provided as a result of this. The use of information technology promotes increase of technological processes efficiency. Therefore, it allows company to automate its internal processes.

Analysis of recent research. A lot of scientific research are dedicated to information accounting systems and their influence on enterprise activity. For example, Gavrilovsky O.S. investigated the booking of marketing direct and indirect costs. The area of M. M. Benko's research interest is information system and technology in accounting. His work is based on the such researches as Bilukha M. T., Butinets F. F., Sopko V.V., Shkvir V.D. and others. However information systems are developing with each passing day and new problems are appearing.

The aim of the article. The mail aim of the article is to investigate relationship between accounting information system and predict the influence of its using on marketing channels and supply chain.

The main material research. All sub-processes in the internal processes system of the enterprise are linked. Malfunctions of single sub processes can lead to destruction of the entire system. Therefore, it is advisable to use Root Causes Analysis to detect deviation or incorrect work of the internal processes' elements. Otherwise, the results can be dire. An example of such a situation is the case of Chipotle and its supply chain system. Chipotle suffered a big crisis in 2006 [6]. All this happened because of the disruption in the work of supply chain system. Root Causes Analysis would be useful to determinate the causes of this failure and ways for internal processes improving. The first step in this example is the control charts development. They provide differentiation between special and common causes variations. This makes possible to determine the occurrence of deviations in the supply

chain function in time when the change was detected. Figure 1 shows Chipotle's supply chain in 2006. Managers buy part of the raw material on the farm and some other manufacturers. Products are shipped to distribution centers after its packaging. Then, it is distributed across the network restaurants. The food in restaurants is prepared and provided to visitors.

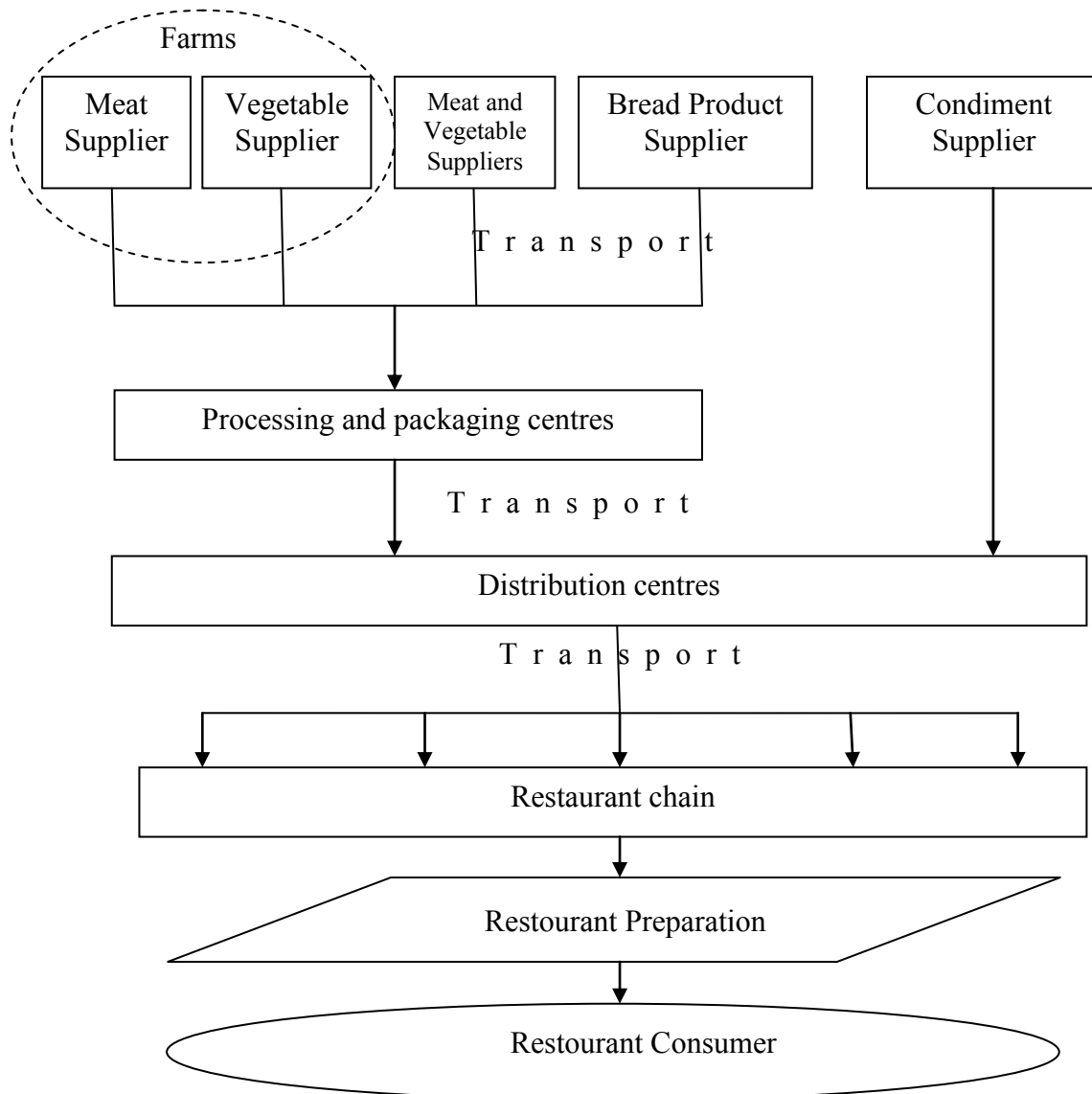


Fig. 1. Chipotle's supply chain in 2006

After the Chipotle's food contamination crisis, Executive director has decided to change cooking process technology and therefore supply chain system has been changed also [6] (Figure 2). Now, the foods that are received from suppliers undergo rigorous laboratory testing under control of Mansour Samadpour. Also food is being prepared centrally and after that is transported in distribution centers. These changes helped to minimize the risk of food contamination and remove the responsibility from the staff of the restaurant for its quality [6]. This led the Chipotle to improvement of its financial economic state.

As we can see, the Chipotle has improved its internal processes through the development of more complex supply chain. But another way to optimize internal processes is to simplify this chain. For example, restaurant Calexico Cart has complex structure of supply chain. The way to the restaurant's internal process optimization is simplification of its supply chain. The way of achieving this goal can be determined through the using of Six Sigma methodology [1, 234-236]. Since it provides an opportunity to analyze the business processes and predict the result of new project introduction. Thus, Calexico Cart should to select one distributor in the restaurant business instead of multiple suppliers and automate the flow of accounting information through the use of cloud-based technology of information processing. The improved supply chain is showed in Figure 3.

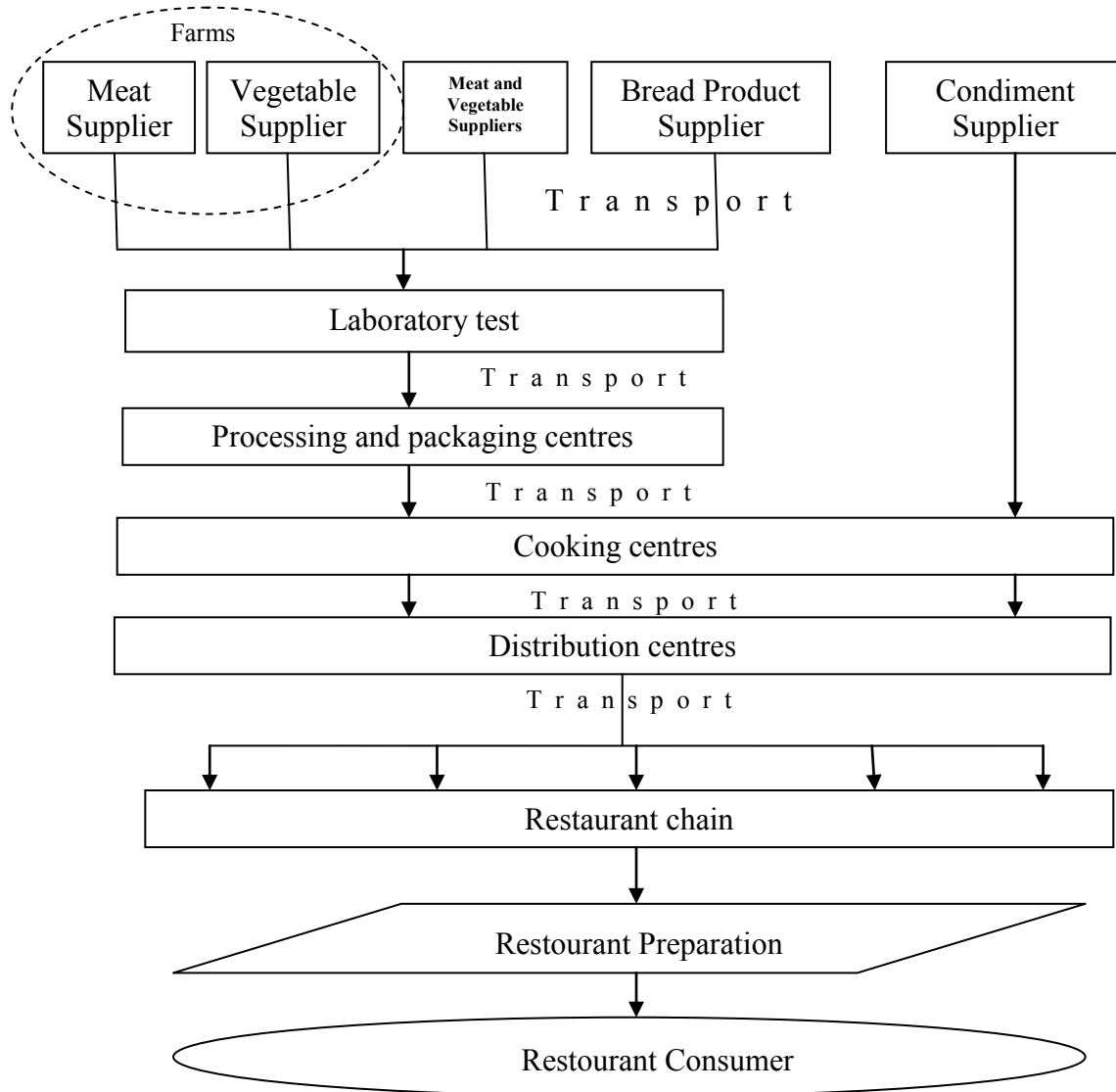


Fig. 2. Chipotle'a supply chain in 2015

This supply chain allows managers to operate timely and accurate information, reduce the time for the accounting information exchange and accelerate the process inside of the system. This all lead to improve internal process of the restaurant. But not only supply chain defines the successful enterprise activity. Every company should to know what products, how much, where, when and at what price it will sell before to plan volume of production and to form production capacity. But for that the company must to study the demand for the product, its sales markets, their capacity, actual and potential competitors, potential customers, the ability to organize production at competitive prices, the availability of the necessary material resources, the availability of staff the necessary qualifications, etc [3, 58-62]. The final financial results, the capital reproduction, its structure and the financial stability of the enterprise depend on it. Marketing and Research Companies help to enterprises to search for new markets, new buyers, new goods and new applications of traditional products which can ensure the highest level of profits.

The first step on way to reach it is to select a marketing channel. This is the path the products move from producer to consumer. It consists of the enterprises or entrepreneurs who take over an ownership or help someone to pass a title to a specific product or service. The goods sales through an intermediary obviate the manufacturer' need to look for buyers. There is a huge variety of intermediaries, among them are: resellers, firms engaged in merchandising; agency of marketing services and financial intermediaries. Among them are banks, credit, insurance companies and other units that provision of financial services and insure against the risks to enterprise-producers [2, 134-151]. Producing enterprises also need to solve the problems of products transport and storage. In these cases, they turn to storage and transport companies that help producers to move merchandise from their developers to destination. The reseller is a legal and natural persons which to assist the producers to find consumers and sell gods. These include retail and wholesale trade.

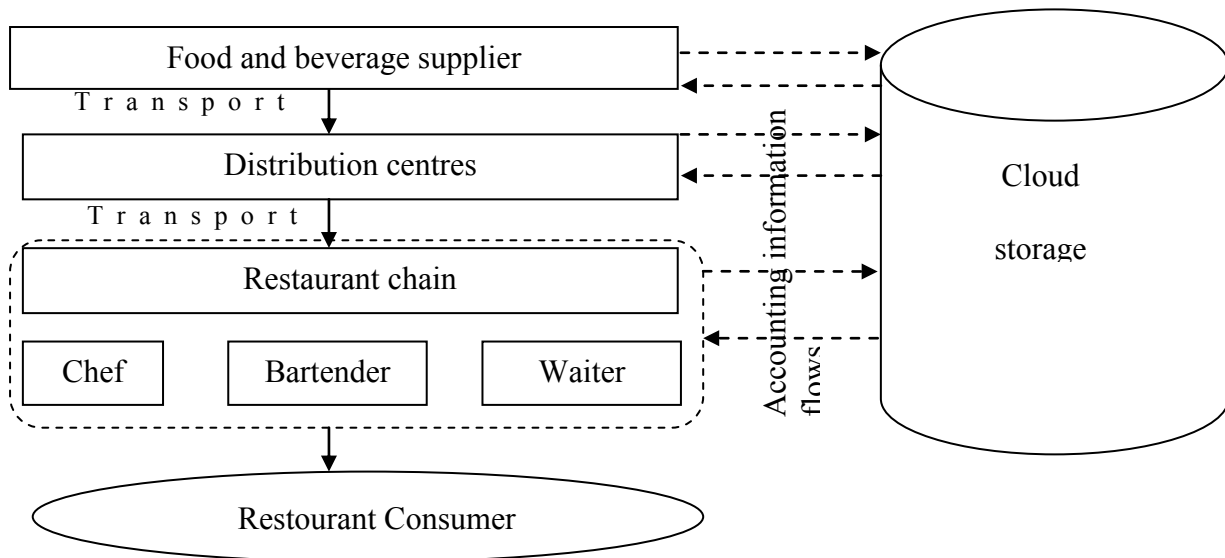


Fig. 3. Calexico Cart's supply chain

The first step in choosing the channel is to determinate its type. Direct marketing channel is characterized by the absence of any intermediaries. Retailer to customer is a channel in which the retailer receives the merchandise from the producers and then sells them to customers. Wholesaler to customer is more complicated channel and includes two intermediaries. The fourth kind of channel has the most complex forms and, besides the wholesalers and retailers, it includes and other (functional) resellers (agents and brokers). Marketing members have a key role in the marketing channels, they help to seal the deal through the next functions [4, 87-94]:

- information – gathering and dissemination of information, which has been obtained during market research about existing and potential customers, competitors, other participants and other factors marketing environment. The high-level intermediaries can offer to their suppliers the users live access to sales data. It includes information that show how the products are sold in the context of geographic location, kind of customer and goods location.
- promotion – the communication policy formation in order to customers attract;
- negotiation – involves “agreement reaching on price and other issues to ensure transfer of ownership right of goods”;
- matching – the proposition creation and correction offer to the buyer's needs and includes such activities as the production, sorting, assembling and packing.;
- financing – funds finding and distribution which are needed to cover the costs that arise at different levels of channel operation. Many manufacturers feel the lack of financial resources for the introduction of direct marketing. For example, even the largest automakers sell their cars to help tens of thousands of independent dealers. Even monsters automotive industry would be difficult to find the money to buy all these dealer firms. Also, mediators provide programs that allow customers to purchase products more easily. It includes credit programs; plan payments; delay the payments start; the trade-in or exchange options.
- risk taking – responsibility assume for the operation of the channel;
- physical distribution – goods’ storage and movement from the manufacturer's warehouse and ending with final customers facilities. This process includes warehousing, material handling, transportation and inventory management, order processing. It affects how marketers receive the products, where and when they should be there and at the lowest possible cost.
- contact – searching for clients and communication with them.

All these features “are characterized by three general properties” [5, 245-262]: they absorb limited resources; the tasks can be performed better through specializing and can be executed by different members of the channel. If manufacturer carries out some of them, its costs are rising accordingly, and, therefore, prices should be higher. If some parts of these functions are performed by intermediaries, the costs and producer prices are getting lower. Intermediaries in this case, have to charge an additional fee to cover its costs for the work organization.

To optimize the marketing policy of the enterprise, we propose to use the integrated accounting information system which provides internal as well as external users with relevant and important information. The simplest structure of such system is presented on the Figure 4.

Such accounting information system structure allows optimize the time of information exchange; provide users with most recent and relevant information. If the system would be based on blockchain technology, it will allow make transaction more open for external users (like shareholders) and reduce to zero the risk to lost information because of some dangerous computer virus or receive spam.

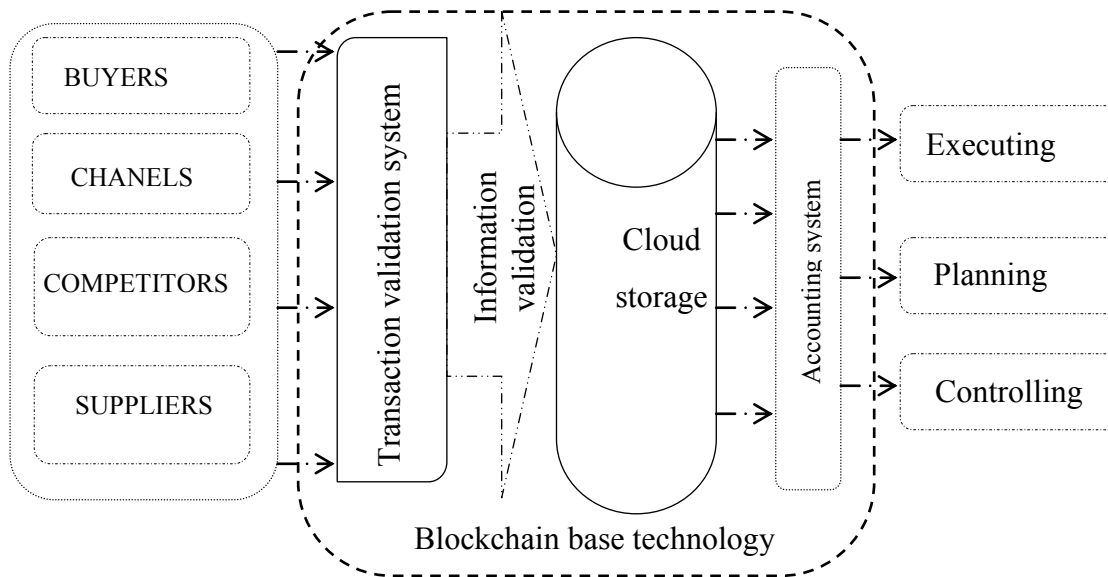


Fig. 4. The integrated accounting information system based on blockchain technology

Summary. The above leads to the conclusion the marketing channels are very important for the modern companies. They are very useful for organizations, marketers and businesses. Each marketing channel member provides value, has some a function and assumes an economic return. In additional, marketing channel doesn't limited by the distribution of goods only. It is also very important for providers of services. According to "marketing channels propose better services at lower prices than in the cause without of its help". Distribution channel members are experts in what they do and can carry out tasks at lower cost and better than company that doesn't have distribution experience. If the marketers of the company will handle too many aspects of distribution information, they may eventually run out the company's resources. Also, companies can reach differentiation through its marketing channels. Each of them may propose different skill, scope and performance. However, companies may to reach economies of scale that marketing channels propose. Decisions on the marketing channel are one of the most important decisions confronting the Organization. Selected channels deeply affect all other marketing decisions. Price formation of the organization depends on how the mass merchandisers or boutiques of high quality are used. Sales department activity and company marketing solutions depend on how much training skills and motivation dealers require. Channel members offer specialization, experience, contacts and economies of scale of the organization. They often perform their work more quickly and its leads to the faster products delivery. For example, let's consider what would happen if the grocery store receive the direct deliveries from the manufacturer. This delivery system would be chaotic. Hundreds of trucks would be line up every day to make the delivery and many of them could include several boxes only. On a busy day a truck may waits for hours for space to unload their products. Therefore, a better scheme of distribution includes a grocery store that buys supplies from a wholesaler grocery. The wholesaler has its own warehouse for processing simultaneous shipment from a significant quantity of suppliers. The wholesaler will bring the goods to the store in the needed quantities, according to the schedule that is suitable for the store and often in the same truck. Also, resellers provide customers with products that they need through bought them from many suppliers and make shopping convenient via making products available in one place within the distribution channel. Channels of distribution provide benefits to manufacturers that only large organizations can to support. Every member of the channel provides a value that is necessary for a marketing channel successful work.

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