

# INOVATION AND ANTREPRENEURIAL CREATIVITY BUSINESS DURING HENRY FORD

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## **Abstract**

*In this paper I presented the innovation and entrepreneurial creativity as a basis in the process of business redesign. I chose as a case study the the Ford brand products, because it is considered that Henry Ford is one of the greatest innovators and entrepreneurs of all time and I decided to present and to analyze these things. The first part of the paper will include theoretical approaches on the innovation and creativity business concepts and premises, and then I showed the ways in which four types of economic innovation under the leadership of Henry Ford (innovation in product, in process, market and organizational) were achieved, with the purpose to recognize them in other companies, nowadays .*

**Keywords:** *innovation; creativity; entrepreneurship; business management; product innovation; innovation in process.*

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## **1. Introduction**

In order to understand the term of innovation in business or innovation in entrepreneurial development we will make some remarks regarding innovation and economic significance, according to specialty literature.

Over time a number of scientists in economics, such as JB Say (1800), J. Schumpeter (1911) and more recently Peter Drucker (1984) gave different definitions of innovation, entrepreneur, creativity, entrepreneurial system. These definitions contain common elements, but also differences resulting from the features and the economy during that time.

From an economic perspective, the theory treats at least four types of innovation: product innovation, process innovation, marketing or commercial innovation and organizational innovation. To better put out all these theoretical concepts, I decided to present and analyze as a case study the entrepreneurial profile of Henry Ford and the Ford brand products. I chose to study about Henry Ford because in most entrepreneurship books he is given as an example of one of the greatest innovators and entrepreneurs of all time, but it is not specified in detail why he is awarded this title. Therefore, I wanted to analyze what defines and differentiates Henry Ford from other entrepreneurs, and Ford brand products from other products in innovation and entrepreneurial creativity.

## **2. Concepts and premises of innovation and entrepreneurial creativity**

*Jean Baptiste Say's approach (1767-1832) related to entrepreneurship.* Jean Baptiste Say - French economist sec. XIX – is the one who created the the term *entrepreneur*. Say said that the entrepreneur is someone who "transfers resources from an area with lower productivity in one with higher productivity and higher profits", creating therefore, value [7].

*Joseph Schumpeter's approach on entrepreneurship.* Joseph Shumpeter, Austrian economist, representative of the Neoclassical School, with important contributions to the study of the global economy and representative account of the theory of economic development. The representative works: "*The Theory of Economic Development*, 1912"; "*Capitalism, Socialism and Democracy*, 1942 ". Joseph Schumpeter can be considered the most important personality in the beginning of the twentieth century that changed the meaning of the term *entrepreneurship* in terms of economic thought. In Schumpeter's view, the only people who can contribute to "*economic development*" are *leaders* or those economic actors that have the energy and motivation to act differently, „*to open a new road*"[7]. In the edition of 1911 of his paper, Schumpeter describes the leader as the "*man of action*", meaning "*that person who never accepts the reality as it is presented at a time*"[6].

"*The entrepreneur*" says Schumpeter, "*is our man of action in the sphere of economy. He's the economic leader, a real leader and not merely apparent, as the leader of the state*" [7]. What differentiates the entrepreneur or the "man of action" from the static person is the courage, vision, creative spirit, the ability to initiate a something new, to recombine or imagine new combinations of some already existing resources. From this perspective, the entrepreneur is

not necessarily the person who invents something new, but one who imagines "new ways to use existing resources", respectively to make new combinations in the economic sphere.

The definition of innovation, provided by Schumpeter in his paper *Theory of Economic Development* and then continued in 1942, in the paper *Capitalism, Socialism and Democracy*, has a character of great generality, that is "innovation is to produce something else or to produce differently" [7].

If we analyze Schumpeter's innovation approach, in the specialty literature there are discussed the following types of innovation:

1. product innovation - creating a new product;
2. innovation process - introducing a new method of manufacturing;
3. marketing or market innovation - entering a new market (or create a new market);
4. organizational innovation - a new organization of the company.

Entrepreneurial spirit is defined and recognized in the specialty literature *as the ability to be successful on the market with a new creation*. The concept of *entrepreneurial spirit* was addressed by economist Peter Drucker, too. It considers essential the idea that "any activity is worth taking into consideration if it materializes into added value, if it brings money" [2]. He goes further and sets out the fundamentals of entrepreneurship [4]:

- Hard work, ingenuity and predisposition for business
- The power and ability of innovative entrepreneurs
- The result of entrepreneurial innovation must have an economic effect.

### **3. The Innovation and Creativity in Ford Motor Company**

#### **3.1. Overview of The Ford Company**

In 1898 Ford founded the Detroit Automobile Company with several associates. Ford Motor Company was founded on June 16, 1903 in a small wagon factory in Detroit, later transformed. "Its fixed means consist of tools, installations, machinery, plans, specifications, designs, patents, several models and \$ 28,000 cash provided by 12 investors" [9]. In the moment of formation of the Ford company, the ownership structure was as follows: Alexander Malcomson 33%, Henry Ford had 25.5%, John S. Gray 15% of the shares and the remaining was held by other investors. In addition to Henry Ford, the first original corporate shareholders were: a coal merchant, a banker who credited coal dealer, two brothers who owned the factory engine workshop, a carpenter, two lawyers, a seller, owner of a haberdashery and manufacturer of windmills and compressed air guns. Solid foundations of the company were marked by the year of "1907 when Henry Ford bought the shares of the associates and became Chairman and majority shareholder" [12], [13].

FORD MOTOR COMPANY is currently the second largest automobile company in the world with approximately 350,000 employees, operating in more than 200 markets across six continents. Ford car brand products are Aston Martin, Ford, Jaguar, Land Rover, Lincoln, Mazda, Mercury and Volvo. The automotive services include Credit, Hertz and Quality Care. Company World Headquarters is located in Dearborn, Michigan. In Europe, Ford has over 60,000 employees and operates in 42 markets [9].

#### **3.2. The profile of Henry Ford as an Entrepreneur**

*Some biographical data.* Henry Ford was born into a family of farmers on July 30, 1863 in Michigan, and although it was expected to continue the tradition, he did not become a farmer, but rather he had become the best known and most highly regarded entrepreneur of his time. Since he was little, Ford showed curiosity, self-confidence and a mischievous nature, always in search of something new. He was fascinated and passionate about cars and he was willing to take risks to pursue this passion. Henry Ford started young when he was 12, Henry spent most of his time in a small mechanical workshop, which he arranged himself.

Here he built the first steam engine in 1878, when he was just 15 years old. He continued his apprenticeship at Detroit during 1879-1882 in a garage [16]. The year 1888 marked a major decision in his life, namely to get marry Clara Bryant; to support his family, Henry took over a sawmill in the region and also opens a garage at his father's farm. In this workshop he repairs cars and engines and experiments many of the ideas that will help him in the future. In 1891 goes to Detroit where he is hired as a mechanic and later as an engineer at Edison Illuminating Company. He starts working in parallel, learning more about the power-drive motor. The culmination of his experiments was to build a self-propelled vehicle - Quadricycle - in 1896. Thus, in 1896, at the age of 32, H. Ford built his first vehicle without horses, powered by a gasoline engine lit with the aid of electricity, which he called it Quadricycle, but he could not capitalize it [14],[16].

The first engine Ford made history directly from the kitchen table of Henry Ford and it was followed, shortly, by his next project - an engine mounted on a frame with four bicycle wheels - the first Ford car. After quitting from Edison in 1898, Ford established the Detroit Automobile Company together with many partners, but the company went bankrupt due to numerous misunderstandings. But as he usually didn't give up when encountering an obstacle, he built several racing cars and drove, on October 10, 1901, the famous 'Sweepstakes', snatching victory from the American

champion Alexander Winton. In 1907 Henry Ford acquired the shares of all shareholders and he remains at the lead of the company with his family.

The entrepreneur is an innovative person who changes things, has new ideas, he promotes and develops them, until they are accepted and become part of everyday life. Innovation involves self-confidence, leadership ability, risk-taking and a vision towards the future. The synthesized portrait of the entrepreneur and innovator Henry Ford can be characterized as follows:

- He worked on his own - just to be able to put his own ideas and visions into practice
- Inventive and curious by nature
- Never satisfied with what he had done - he wanted to create a model of car that was accessible to everyone
- He did not consider failures as failures, they mobilized him more
- Ambitious and passionate nature for a particular aspect (engines and mechanics, in his case), without thought of profit;
- Major risks assumed and took into account what is required on the market
- Persevered and never gave up on his inventions and tests
- Was a visionary and he continually explored
- His whole life was devoted to what he thought - improving the functioning of a motor car.
- People-oriented, he campaigns for financing peace and charity organizations.

### 3.3. Product Innovation at Ford Company- T Model

After many trials and production of car models denoted by letters of the alphabet, so that between 1903 and 1908, Henry Ford and his engineers have passed swiftly through 19 letters of the alphabet - from Model A to Model S, they have reached the legendary T Model in 1908. The T Model has made a spectacular entrance into history at October 1, 1908 and it has been presented to the world market at the Olympia Engines Exhibition in London in November 1908. Through T Model put on the market in 1908, Henry Ford had fulfilled his dream of factoring a reliable, efficient and reasonably priced car. This vehicle has marked a new era in personal transportation, it was easy to use, maintain and handle on rough roads. When Ford joined the auto industry, people did not drive their own cars, they owned drivers. The cars were considered luxury items, too. Ford's vision was that the machines can be an everyday tool.

This long wished vehicle, T Model, the most famous car ever built won the vote of millions of Americans who have nicknamed it "Tin Lizzie". In the first year of production 10 660 cars were put on the market, which led to overcome all records in the automotive industry. [14],[15]. When he created the T Model, Ford thought of these terms:

Table no.1. **Henry Ford's Mentality About Product Innovation**

	<b>Characteristics</b>
Product innovation in T Model launched on the market in 1908(produced by the Ford Company)	Destined for the majority
	Reliability-reliable and durable for the bad roads at that time
	Cheap price(260\$ without options-400\$ with options) in the situation that a limousine, a luxury car was sold with 2.500\$
	Accessible to all Americans
	Easy to use, maintain and handle, with less weight, using a steel alloy in construction engine – the engine block was built in one piece
	Simple and resistant car, with flexible suspensions and breaking
	For everyday personal use

That is why the T Model was also wearing the name "*Universal Car*" so that in the 19 years in which T Model was manufactured, there were produced and sold in the United States alone 15,007,033 vehicles. However after 1920 due to Ford's conservatism he lost ground to the competition.

### 3.4. Process Innovation at the Ford Company- Mass Production

The process innovation at Ford Company is characterized by the fact that he imposed and applied the principles of mass production assembly line in terms of increased productivity, speed and efficiency at work. When it launched in 1903, Ford Company produced three cars per day at each of three workers working simultaneously. After a few more cars were built, it germinates in his mind the idea of production on the treadmill. The growing demand determined Ford to seek solutions to increase productivity and thus arose the assembly line and standardized parts. When the mass production permitted the assembling of 50 cars in 24 hours, Ford brand detached from all other producers. Henry Ford began to address specific eccentricities that hardly seemed specific to a businessman. The result was seen immediately: a car came to be realized in just 93 minutes and he reached the incredible production figure of 1 million cars per year (one every 24 seconds) [10],[11].

#### **Ford's Innovations in Mass Production- Assembly Line**

- Clear tasks for workers
- Place well established for each worker

- Principles for increased productivity
- Concern for reducing production costs - in this regard for cost reduction , a measure was the use of unskilled workers
- Permanent concern to reduce manufacturing cycle, reaching performance to produce a car eight times faster than the competition (from twelve hours to one and a half)
  - Allocation of significant amounts of money to research and investment in machinery performance. Incentives on wages - wages measuring up to the efforts – payment of \$ 5 per day, while the auto industry wages were two times lower. Ford said: "I can find production methods that lead to higher wages," said Henry Ford. "*If you reduce wages, you will only reduce the number of customers.*" [10]
- Introduced for the first time in the world the reducing of the working week to 5
- Reduced working day from nine to eight hours, in three shifts, so that the working day was 24 hours
- Efficient workers and charge high degree of working time; eliminate downtime
- Optimization of an automobile assembly time, reaching a record of 93 minutes
- Application of methods of organizing jobs and flow optimization studies
- Defined a new assembly based on segmentation and simplifying the manufacturing process
- The use of skilled labor for major operations, but also unqualified workers for operations with interchangeable parts
- All stages of production were studied thoroughly, including services that served the production line, such as transmission system
- Guidelines for assemblies were created in all production activities - as distinguished Henry Ford- "*in a factory, everything is moving*" [16].
- Production lines of identical homogeneous products
- Usage of quality materials, parts were more durable due to their thermal treatment and the use of alloys.

His concerns for low costs attracted also some difficulties: the cars were offered in one color (black) and they did not have much of extras. Therefore, in 1920, when General Motors came on the market with more complete cars and a wide variety of colors, providing a customer credit policy, Ford Motor Company found himself in second place. The Ford is forced to modernize the manufactured cars and come with different colors (until then he only produced cars in one color, black).

### 3.4. Commercial Innovation- The Ford Logo



The Ford logo with engraved letters is dating from the beginning of the company, when the assistant engineer of Henry Ford created a stylized version of the words "Ford Motor Company" in the style "Art Nouveau" at the A Model launch in 1900. Until the launching of the logo in an oval form, the writing has undergone some transformation, in 1906, when the Ford logo appeared in the so-called "calligraphy with wings" and then in another form, of a triangle "with wings", in 1912 at the launch of the T [9],[10],[11].



The oval Ford logo is one of the most recognizable symbols in the world. The first "blue oval" was created in 1911, but was not held much on the market, only until 1912. The shape of the oval blue close to the one today was created in the early 1927. Over time, the "oval" shape has undergone changes, such as in 1976, when it was created the "blue oval with reflections" and in 2003 it took place the last adjustment of the Ford logo, being called "oval of a new century."

### 3.6. Among the favorable conditions for innovations from Ford

Henry Ford was a visionary and from an inventor he had become a successful entrepreneur, making the Ford automobile company one of the most famous companies in the world.

Ford's ideas could be implemented by benefiting from more specific factors of the business at that time. Among the factors that influenced positively and accelerated his success, were:

Table no.2. **Factors in Ford Innovation**

- it was the initial period of management and production management concerns: those related to the management or control of productivity, specialization and division of labor
- it was the period of industrial upsurge - steel industry, electricity, steel works and oil
- extremely high birth rate in the US, due to migrants, a young population which prints a strong economic dynamism
- the needs generated by the construction of railways determine the development of steel, metallurgy and machine building
- reforms in the political, economic and social domain

The beginning of the twentieth century is characterized by multiple transformations recorded in the industry, the economy, politics and social plans. It outlines the beginnings of scientific management, when the first joint stock companies appear and all economic and social life is in constant change.

#### 4. Conclusions and Final Opinions

Henry Ford is the man who laid the foundation for building cars in series, inventing the brand that bears his name. Henry Ford changed the lives of many people, due to practical and affordable cars that he produced.

He thought production in simple terms streamlined production lines, highly paid employees and created a machine to the needs of the people. That is not only for a set of customers, he thought that the car he puts on the market has to be also for family, and leisure or walk. Even more, he offered his employees the chance to buy the car they produced it.

He gave importance to labor relations and to human resources so that he hired ' the right man in the right place", both skilled and unskilled,. He promoted the unqualified jobs. He knew how to motivate people, economic motivation was at that time considered the most important, so he doubled the wages.

Also in the innovation process, he had implemented new methods to the assembly line, he organized labor sector, optimized working times. To gain maximum efficiency, Ford reduced working hours of employees from 9 to 8 hours per day, so that they work in 3 shifts that covered 24 hours a day, with no downtime.

He also brought innovation in the indirect production activities such as *transport, supply, maintenance or assembly production lines*. Ford is the only one who made possible the mass production of the automobile, introducing the assembly line and standardized parts

He developed sales departments and promotional campaigns. He hired talented people, for example the famous sales manager at Ford at the time, a brilliant accountant, Norval Hawkins.

In conclusion, we can say that Henry Ford brought together all the qualities of an entrepreneur and innovator in business: curiosity, self-confidence, leadership and ability to take risks, the ability to identify and attract valuable people. He touched all innovations Sumpeter identified, namely: product innovation, process innovation, trade and even the organizational, the way he organized and led the Ford Motor Company.

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