

The Application of Entrepreneurship Theories in Empirical Research

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Article History

Received : 10 October 2022

Revised : 30 October 2022

Accepted : 15 November 2022

Published : 27 December 2022

Citation

Mohammed Aminu Bello (2022). The Application of Entrepreneurship Theories in Empirical Research. *Indian Development Policy Review*, Vol. 3, No. 2, pp. 259-279.

Abstract: The role of Entrepreneurship theories and research in the development of the entrepreneurship field cannot be over emphasized. The paper aims at given an overview of some important classic contributions relating to present and most likely future empirical research subjects in the field of entrepreneurship. Using content analysis, the paper seeks to provide answers as to the position of the entrepreneur within the economic system; the position of the entrepreneur within the Firm; the definition of the Entrepreneur; the entrepreneurial ability or personality needed in order for an Entrepreneur to successfully perform the task; the returns to entrepreneurship and the Entrepreneurial drive and finally, the factors that Determines supply and demand in the entrepreneurs market. This was achieved by analysing six past contributors in entrepreneurship research in the persons of Richard Cantillon, Jean Baptiste Say, Alfred Marshall, Joseph Schumpeter, Frank Knight and Israel Kirzner. The analysis offered a number of insights into what actually determines a successful entrepreneurship. It is clear from the analysis that the field of entrepreneurship has some interesting and relevant theories which are underpinned by empirical research evidence. This development holds a rather brighter future for the study, research, and practice of entrepreneurship.

Keywords: Entrepreneur, Theories, Research, Firm

1. INTRODUCTION

Several theories have been put forward by scholars to explain the field of entrepreneurship. These theories have their roots in economics, psychology, sociology, anthropology, and management. In order to solve the many problems of today both in the private and the public sectors, entrepreneurial activity on a large scale, based on a sensitive and innovative attitude, guided by a broad concept of welfare, is needed even more than before Heertje (1982).

Given the importance of entrepreneurship in economic practice today, the inquiry as to the role of entrepreneurship in economic theory and how did it develop arises and in order to answer these questions, a review of some key contributions to the theory of entrepreneurship, which actually started to develop halfway during the eighteenth century. In the past, philosophers of science did not hold entrepreneurs in high esteem; they were not at all regarded as enhancing society's well-being.

Instead, profit making which is the pecuniary return or gain to entrepreneurship, was perceived as robbery ever since Aristotle had introduced the persistent idea of economic activity as a 'Zero-sum game,' i.e. one man's gain is another man's loss. In the present day however, most economists and other practitioners of behavioral sciences as well as politicians will readily admit the importance of the entrepreneur's role in society. Entrepreneurs are held responsible for economic development, by introducing and implementing innovative ideas such as product innovation, process innovation, market innovation, and organizational innovations. The successful execution of these new ideas gives rise to the satisfaction of new consumer wants and to the creation of firms. The created firms cause economic growth and provide jobs for the working population. Consequently, as a result of stimulating both a product market and a labour market, entrepreneurs can be given credit for their significant contribution to the economy. These are the benefits pertaining to successful entrepreneurship. Unfortunately, not all entrepreneurs turn out to be successful. Many of them failed without arriving at the stage of employing personnel or turning their business into profitable organizations. Their ventures fall short of surviving even the initial period or else even worse, they go bankrupt. These are the private, psychological and social costs pertaining to failed entrepreneurship. Determinants of entrepreneurial start-up and success can serve as an instrument to gain insight into the manner in which economic value can be enlarged through appropriate policy measures. This paper aims at finding determinants of successful entrepreneurship through examining key contributions to the theory of entrepreneurship in some systematic approach. The relevant ideas of Richard Cantillon, Jean-Baptiste Say, Alfred Marshall, Joseph Schumpeter, Frank Knight, and Israel Kirzner are reviewed. Considering these six views, an impression is given of how economic thinking on successful entrepreneurship has developed after Aristotle until now by providing solutions as to the position of the entrepreneur within the economic system; the position of the entrepreneur within the Firm; the definition of the Entrepreneur; the entrepreneurial ability or personality needed in order for an Entrepreneur to successfully perform the task; the returns to entrepreneurship and the Entrepreneurial drive and the factors that Determines supply and demand in the entrepreneurs market.

The definition of the Entrepreneur and the position of the entrepreneur within the economic system and the firm are found in each of the author's concept of the

‘entrepreneur’ While entrepreneurial ability or personality needed in order to succeed in his task, entrepreneurship return, Entrepreneurial drive and the factors that determines supply and demand in the entrepreneurs market are found in latter part of the work. The theories are then compared to each other and an outline is given of the empirically testable components of each of these contributions. These are compared to recent empirical research results and the paper was concluded.

2. THE EARLY THEORIES OF ENTREPRENEURSHIP

Richard Cantillon (1680[?]–1734) was the earliest scientist we know who paid considerable attention to the entrepreneur. He introduced the very concept of ‘entrepreneur and he was the first to acknowledge that there is an entrepreneurial function within the economic system. Ever since Cantillon’s, entrepreneurs appeared in economic theory as contributors to society’s economic value. Cantillon recognizes in his economic system three types of agents: land- owners ‘capitalists’, Entrepreneurs ‘arbitragers’ and hirelings ‘wage workers’. His perception of the market is one of a ‘self-regulating network of reciprocal exchange arrangements’. The entrepreneur has a central role in this system because ‘he is responsible for all the exchange and circulation in the economy’. The class of entrepreneurs brings about equilibrium of supply and demand. The entrepreneurial class accomplishes its task by engaging in pure arbitrage. The motivating factor is the potential profit generated from the activity of ‘buying at a certain price and selling at an uncertain price.’ Cantillon thus recognizes that arbitrage always involves uncertainty. Cantillon’s entrepreneurs also engage in professional activities other than arbitrage ‘the farmer, transporter, banker, or the seller in the marketplace for instance. The distinguishing feature of the entrepreneurial task as compared to the other types of agents is its risk-bearing nature, which yields uncertain and non-contractually arranged incomes. Landowners and hirelings are not subjected to uncertain incomes, the former because of their rents which are fixed by contract, the latter because of their ûxed wages. As the entrepreneur’s task is basically comprised of arbitrage, he should be alert and forward-looking but he need not be innovative. He adjusts the quantity supplied to existing demand; he does not increase or alter neither demand nor supply. And the entrepreneur should be well prepared to bear the inherent risk. An entrepreneur though, does not necessarily start his venture backed by his own capital. Capital can be borrowed on the ~assumed perfect money market by paying the price of borrowing ‘interest’ to the banker, another entrepreneurial profession. The laws of demand and supply also determine the number of entrepreneurs in each occupation. In case there are too many wine merchants, a number of them will go bankrupt until the surplus will disappear. This adjustment process will not take place at random but according to the ‘survival of the ûttest’ principle: the worst equipped merchants will go bankrupt. On the other

hand, if there are too few entrepreneurs, new ones will be attracted by the advantages of enterprise. In summary, Cantillon was the first to give economic meaning to the concept of 'entrepreneur.' The entrepreneur is functionally described as arbitrageur. By engaging in arbitrage and bearing risk, the entrepreneurial class has an equilibrating function within the economic system. The prerequisite for the existence of an entrepreneurial class is uncertainty.

The economic entrepreneurship theory has deep roots in the classical and neo-classical theories of economics, and the Austrian market process (AMP). These theories explore the economic factors that enhance entrepreneurial behavior.

2.1. The Classical View of Entrepreneurship

The classical theory extolled the virtues of free trade, specialization, and competition (Ricardo, (1817); Smith, (1776)). The theory was the result of Britain's industrial revolution which took place in the mid 1700 and lasted until the 1830s. The classical movement described the directing role of the entrepreneur in the context of production and distribution of goods in a competitive marketplace (Say, (1803)). Classical theorists articulated three modes of production: land; capital; and labour. There have been objections to the classical theory. These theorists failed to explain the dynamic upheaval generated by entrepreneurs of the industrial age (Murphy, Liao & Welsch, (2006)).

According to Jean-Baptiste Say (1767-1832), a *Treatise on Political Economy or the Production, Distribution and Consumption of Wealth* (1803, 1971), the entrepreneur plays a central coordinating role both in production and distribution. Also within the firm, he is the coordinator and moreover, the modern leader and manager. Say is the first economist who stresses this managerial role for the entrepreneur. Compared to other classical economists, Say gives a very prominent position to the entrepreneur in the entire system of production and consumption. He extends the entrepreneurial function as defined by Cantillon. However, by treating entrepreneurship mainly as a superior kind of labor, consciously or unconsciously Say directed attention away from the uniqueness of the entrepreneurial role' Hébert and Link (1988). Say's theory of the entrepreneur in fact arises from his explicit rejection of the 'zero-sum game' economy: According to him "They all take it for granted, that what one individual gains must need be lost to another; ... as if the possessions of abundance of individuals and of communities could not be multiplied, without the robbery of somebody or other" (Say (1803, 1971))

Instead, production gives existing materials capital and nature a utility they did not possess before. So there is a creation of utility which Say calls the production of wealth. There are three types of industry that can create value: the agricultural industry, 'the

manufacturing industry, and 'the commercial industry. The working of each of these 'human' industries consists of three distinct operations that are seldom performed by one person: theoretical knowledge construction, the application of knowledge and execution. Within this division, 'the application of knowledge to the creation of a product for human consumption Say (1803, 1971) is the entrepreneur's occupation. This 'superior kind of labor' is necessary to set industries in motion and thereby attain prosperity within a country. Theoretical knowledge, as important as it is, easily flows from one nation to another since this diffusion is in the interest of the men of science.

The entrepreneur function within the distribution sector 'which is the complement of the production sector in Say's economy is to gather the revenues from the products sold and to distribute these amongst the production inputs: labor, capital, and land. Those inputs or their owners are paid remuneration according to their efforts in the form of wages, interest, and rent, respectively. The entrepreneur has a key position within his own enterprise; he is the coordinator, modern leader and manager. However, the entrepreneur should perform tasks specific to the trade as well and he will 'most of the time also supply at least part of his own capital. He is a risk bearer as well: 'There is a chance of failure pertaining to any entrepreneur activity, however well conducted. The entrepreneur may then lose fortune and in some measure his character' Say (1803, 1971).

A successful entrepreneur should have many qualities. The combination of the various tasks 'requires a combination of moral qualities that are not often found together. Judgment, perseverance, and a knowledge of the world as well as of business ... the art of superintendence and administration' Say (1803, 1971). Furthermore, a successful entrepreneur should have experience within, and knowledge of, the occupation and be in a position to provide the necessary funds:

Not that he should be already rich; for he may work upon borrowed capital; but he must at least be solvent, and have the reputation of intelligence, prudence, probity, and regularity; and must be able by the nature of his connections, to procure the loan of capital he may happen himself not to possess Say (1803, 1971).

As a consequence of these requisite characteristics, talent, and capacity, the number of competitors in the entrepreneurial market is limited. The limited supply maintains the price of successful entrepreneurial labor at a high level, since in Say's classical economy all prices are determined by supply and demand. 'Thus, it is this class of producers, which accumulates the largest fortunes, whenever the productive exertion is crowned by unusual success' Say (1803, 1971). At the micro-level of the firm, the entrepreneur's remuneration is determined as a residual payment: turnover minus the payments to the other inputs of the production process. If this residual is higher than

the wage for management and some risk premium, implying positive gains, then the supply of entrepreneurs increases. If gains are negative, then firms go bankrupt until equilibrium prevails. In summary, the entrepreneur plays a pivotal role in Say's theory of production, distribution and consumption. He is a coordinator both on the market level as well as on the firm level. He is the modern leader and manager within his firm. The successful entrepreneur needs a rare combination of qualities and experiences. Therefore, the number of competitors in the market for entrepreneurs is limited. Consequently, the residual income of the firm when the market is in equilibrium or entrepreneurial wage can become very high.

2.2. The Neo-classical View of Entrepreneurship

Early neo-classical economists, mainly represented by Alfred Marshall (1842–1924), F.Y. Edgeworth (1845–1926), and A.C. Pigou (1877–1959), paid considerable attention to the theory of entrepreneurship. However, the formalized models of the majority of later neo-classical economists did not substantially contribute to the theory of entrepreneurship. These models have heavily influenced current research methods, especially in microeconomics and also in entrepreneurship; the 'textbook' neo-classical school of thought is hereby briefly introduced. In the usual interpretation of the neo-classical model all individual agents have perfect information and have their economic objectives clearly stated. Firms choose profit-maximizing production packages, given their production function. As of 1978, some neo-classical formalized models have been built in which the entrepreneur's role has been resurrected.

In choosing levels of input, the firm performs a calculation that yields optimal values for all of its decision variables and these values constitute the profit-maximizing business decision. Consumers choose consumption packages so as to maximize their expected utility levels, given their budgets. In equilibrium, there is one set of prices at which demand for each good equals supply of that good production plus initial endowments. All markets that are implicitly assumed to exist and to work perfectly well are cleared at this set of equilibrium prices. The optimal values remain unchanged until there is an exogenous change in the economic environment. Then the calculations are repeated and new values are set and remain valid until a new shock occurs. Attention is focused on equilibrium results, achieved in a world without uncertainty. The dynamic adjustment process towards equilibrium is certainly underexplored. Moreover, since credit markets work perfectly well, internal supply of capital is not necessary. The neo-classical model, with its production function, the logic of rational choice and perfect information; leaves no room for an active entrepreneur. The firm runs itself. The entrepreneur has vanished.

Obviously, the entrepreneur has been read out of the model. There is no room for enterprise or initiative. The management group becomes a passive calculator. One hears of no brilliant innovations, of no charisma or any of the other stuff of which entrepreneurship is made; one does not hear of them because there is no way in which they can fit into the model. The model is essentially an instrument of optimality analysis of well-defined problems which need no entrepreneur for their solution Baumol (1968); Baumol (1993).

The mainstream modern neo-classicists have apparently not cared to include the entrepreneur in their formalized model. However, earlier neo-classical theories paid considerable attention to the entrepreneur before the 1930s. Marshall's (1842–1924) seminal work *Principles of Economics* first published in 1890 shows that the entrepreneur was important in neo-classical thought. Marshall's theory attached a more prominent role to the entrepreneur than any other early neo-classical theory.

In a Marshallian society, the entrepreneur's task is the supply of commodities and at the same time as a by-product the provision of innovations and progress. Marshall illustrates the importance of innovations: Businesses that benefit the society most are not necessarily the firm which will survive within the competitive Marshallian environment. The reward of every business undertaker is proportionate to the direct private benefit, rather than to the indirect social benefit he renders to society Marshall (1890, 1930). Within the firm, the entrepreneur bears all the responsibility and exercises all control. He directs production, undertakes business risks, he coordinates capital and labor, and he is both the manager and employer. The alert entrepreneur continuously seeks opportunities i.e. innovations to minimize costs for a given result. Consequently, successful entrepreneurship obviously requires some skills and capacities. First of all, general ability as opposed to specialized ability and intelligence are required to enable one to attain great success in any pursuit and especially in business. According to him general ability implies: To be able to bear in mind many things at a time, to have everything ready when wanted, to act promptly and show resource when anything goes wrong, to accommodate oneself quickly to changes, to be steady and trustworthy, to have always a reserve of force ... Marshall (1890, 1930).

This general ability depends on family background, education, and innate ability. Second, successful entrepreneurship requires specialized abilities such as knowledge of the trade, power of forecasting, of seeing where there is an opportunity, and of undertaking risks. Third, to perform his role as an employer the entrepreneur should be a 'natural leader of men' Marshall 1890, 1930. Not only are these abilities required to make a successful entrepreneur, good fortune as well as business opportunities are necessary requirements, too. The opportunity of acquiring the capital required to allow

ability to be effectively utilized differs among persons. Anyway, people working with borrowed capital have a disadvantage over those who have capital themselves. If the businessman working on borrowed capital is less successful, lenders easily draw back their loans. Consequently, one misfortune may far more rapidly lead to another. Sons of entrepreneurs have additional advantages over others when starting a business. And these advantages are not restricted to their fathers' trade. The son of an entrepreneur has more business opportunities because he closely experiences from his youth on the proceedings of a real business. The returns to entrepreneurship differ from those in other branches of labor. Individual profits show a much higher variance than ordinary earnings do. The number of successful entrepreneurs is but a small percentage of the whole.

Moreover, entrepreneurs earn a rent on the rare abilities required for their tasks. These rents may be regarded as an especially important element in the incomes of businessmen, a surplus. Apart from the level of expected earnings, there are other factors that may affect the decision to start in business. Difficulty and strain of the work and the variance of earnings will usually have a negative effect on the decision, 'though a few extremely high prices have a disproportionately great attractive force' Marshall 1890, 1930. The latter phenomenon occurs because young risk lovers are more attracted by the prospect of a great success than they are deterred by the fear of failure. These rarely experienced high incomes make entrepreneurship stand out as a position of high esteem, which also serves as a major attraction. Entrepreneurial supply is constrained by the abilities required for it. Therefore, the entrepreneurial supply price, as determined by the equilibrating forces of supply and demand, is high. And as long as entrepreneurial profit net advantages are higher than the earnings in other occupation and as long as there are still people with the required abilities and enough opportunity, fresh businessmen enter into the trade. If there are too many businessmen in command of capital to sustain the high price, the 'survival of the fittest' principle, referred to by Marshall as the 'substitution' principle, determines who remains in the trade and who exits.

In brief, the Marshallian market economy centers on the class of entrepreneurs. Entrepreneurs drive the production and distribution process, they coordinate supply and demand on the market, and capital and labor within the firm. They undertake all the risks that are associated with production. They lead and manage their firms. They minimize cost and are therefore also innovators and the reason for progress. The abilities required are many and combinations of them are scarce in society. Consequently, the supply price for entrepreneurship will generally be high.

Joseph Schumpeter (1883–1950) on the other hand contributed significantly to the theory of entrepreneurship. Most of his ideas are reflected in his book *The Theory*

of Economic Development, first published in 1911. His theory was the first to treat innovation as an endogenous process. He turned down the predominant paradigm of entrepreneurship as management of the firm and replaced it with an alternative one: the entrepreneur as leader of the firm in modern business management language and as the innovator and therefore, prime mover of the economic system. Schumpeter integrated the dynamics of technology and business enterprise by defining the entrepreneur as an innovator. He explicitly opposed the idea of the entrepreneur as a risk-bearer and a capitalist. He integrated psychological theory in the economic theory of entrepreneurship. To describe the entrepreneur's contribution to the economy, Schumpeter starts his theory with a contrasting world: one without the entrepreneur, 'the circular flow.' In this static world, every day is a repetition of the preceding one. It is a world without uncertainty or change. All decisions can be taken unconsciously upon long experience.

Then the entrepreneur appears on stage. He seeks opportunities for profit. He introduces 'new combinations' or innovations to reach this goal. This innovative creation of the entrepreneur is seen by Schumpeter as the prime endogenous cause of change development in the economic system. New entrepreneurial combinations destroy the equilibrium in the economy in the circular flow and create a new equilibrium. Ongoing innovation therefore implies permanent discontinuous change and permanent disequilibrium. An entrepreneur is not necessarily the director and independent owner of a business. An entrepreneur is a person who carries out new combinations; in whatever position. In most cases, new combinations are not carried out by the producers of the combinations that are eventually replaced. As a rule they are embodied in new firms that start producing alongside the old firm. This way, old firms are eliminated whenever they cease to carry out new combinations themselves. The entrepreneur's task is to innovate and to lead, i.e. deciding which objectives to pursue rather than deciding on how to pursue them. He is not a risk-bearer or a supplier of capital. Both of these tasks are left to the banker. Being apt and willing to take up an entrepreneurial task requires a rare attitude and a particular conduct. Leadership is required in order to 'lead' existing means of production into new channels out of the accustomed ones. Moreover, the entrepreneur should not feel reluctant to do something new. 'This mental freedom ... is something peculiar and by nature rare' Schumpeter (1911). By doing something new and thereby showing deviating behavior, opposition arises in the social environment. The entrepreneur should 'be strong enough to swim against the tide of the society in which he is living' Heertje (1982). Furthermore, innovating requires some special psychological motives. Entrepreneurs do not perform their task in the first place in order to satisfy their own consumption wants. The motivating factors of pursuing indirect instead of direct consumption are: The dream and will to found a private

kingdom in order to achieve social distinction. This dream is the more fascinating; the less opportunity for achieving social distinction is available to an individual. The will to conquer, to fight, to prove oneself superior to others, to succeed for the sake of success itself, not for the fruits of success, rather for the joy associated with success.

One needs not to be rich for having the opportunity to start as an entrepreneur. Innovations can be equally well supported by own wealth as by credits. If they are supported by own wealth, the entrepreneur fulfill two jobs: the entrepreneur's job and the banker's job. Anyhow, it is the banker who bears the financial risk pertaining to an innovation, not the entrepreneur. Carrying out innovations is a profit-driven activity. However, most entrepreneurs are not motivated by the purchasing power provided by profit, but rather aim at business success for which profit is an indicator. 'By being the first to introduce a "new combination", the entrepreneur obtains temporary monopoly power' Baumol (1993). But profit is the signal to imitators that above normal gains can be made. Hence, entry and competition erode the initial profit position of the entrepreneur sooner or later and a new equilibrium position is reached. 'Even if the entrepreneur succeeds in establishing a monopoly whose returns continue indefinitely... the flow of gains to the entrepreneur in her entrepreneurial role must be very temporary. ... It is transformed into monopoly rent rather than entrepreneurial profit' Baumol (1993). Hence, being an entrepreneur is neither a profession, nor a lasting condition. Entrepreneurs do not form a social class, though successful entrepreneurship may lead to certain class positions, according to how the proceeds of the business are used. This class position is also part of the remuneration of the entrepreneur. It can keep up for several generations by the inheritance of pecuniary results and entrepreneurial qualities. This makes further enterprise easier for descendants, though they cannot inherit the entrepreneurial position itself. Entrepreneurial supply is mainly restricted by the rare motivating forces required for it.

To sum up, Schumpeter's entrepreneur is an innovator and leader. But he is neither a risk-bearer, nor a manager or capitalist. The innovator is the engine of economic growth. He leads the economy away from its otherwise static Equilibrium position and forces it to a higher equilibrium position. Innovations are endogenous developments in a dynamic economic system. Entrepreneurs are willing to innovate, due to the possession of some scarce motivating forces. Entrepreneurial activity and the accruing profits are not lasting. Entrepreneurship is a temporary condition for any person, unless he keeps on innovating.

Furthermore, Frank Knight's (1885–1972) major contributions to the theory of entrepreneurship are included in his doctoral dissertation *Risk, Uncertainty and profit*, first published in 1921. He was the first to explicitly distinguish between risks and true

uncertainty. The economic function of the entrepreneur is bearing the real uncertainty. Knight has generalized Cantillon's theory of entrepreneurship. The entrepreneur bears uncertainty more specifically defined than Cantillon's risk, and entrepreneurship involves more than arbitrage only. Moreover, Knight has contributed a thorough analysis of the motivations and characteristics needed to become a successful entrepreneur: a successful uncertainty-bearer and judgmental decision maker. The characteristic feature of the society through which the entrepreneur gets his role is uncertainty. Uncertainty, unlike risk, comprises a type of probability for which there is no valid basis at all for classifying instances because it concerns the outcome of a unique event. Hence, judgment should be exercised both for the formation of an estimate and the estimation of its value. This true uncertainty forms the basis of Knight's theory of profit, competition and entrepreneurship. This kind of uncertainty, which had been ignored in economic theory before, is borne by a particular subset of individuals in society: the entrepreneurs.

Business decisions practically never concern calculable probabilities. Entrepreneurs are specialized in responsible direction and control, in dealing with real uncertainty, while all others furnish them with productive services for which the entrepreneur guarantees a fixed remuneration. Thus, entrepreneurs assume the uncertainty of changing consumer wants or changing purchasing power. The savings resulting from reducing uncertainty accrue to society Knight (1921, 1971). Entrepreneurs are held responsible for economic progress, like improvements in technology and business organization. It is extremely important and lucrative to society to select to the entrepreneurial positions individuals who are most apt for it. Entrepreneurial ability is the bottleneck in determining the size of each business. The essence of the entrepreneur's position in a corporation is his responsibility for direction and control whenever uncertainty is involved. He exercises judgment effectively, is the decision maker, and he takes the responsibility for his decisions. Decisions include the planning of where, when and what kind of products to create. In addition to these estimating and judicial tasks, the entrepreneur is responsible for guaranteeing the estimated values to the other parties involved with his firm. The entrepreneur assumes the uninsurable business hazard. Successful entrepreneurship requires not only entrepreneurial ability as described below but also good luck and the belief in one's good fortune. Entrepreneurial ability heavily depends on one's ability to effectively deal with uncertainty. Differences among individuals with respect to their ability to deal with uncertainty give rise to dedicatedly allocating the entrepreneur's function in the hands of those who are most able to deal with it. The power to effectively deal with uncertainty requires the following: a high degree of self-confidence, the power to judge your own personal qualities as compared to those of other individuals competitors, suppliers, buyers, and employees!, a disposition to act on one's own opinion, a venturesome nature, and foresight.

Entrepreneurial ability includes furthermore, besides the requirements for dealing with uncertainty, 'the power of effective control over other men as well as the intellectual capacity to decide what should be done' Knight (1921, 1971). Success as an entrepreneur depends furthermore on the availability of enough capital to guarantee factors their fixed remuneration. As long as a prospective entrepreneur believes in his own capacity and has the wealth to back up his judgment, he does not need to convince others in order to dispose of the necessary capital for starting a business. But if he is not wealthy enough, he must find external financial backing and hence be able to convince this outside party that he is right. The entrepreneurial task is rewarded with the residual income profit, the reward for bearing uncertainty. The competition of prospective entrepreneurs bidding in the market for society's productive services determines prices upon these.

The division of social income between profits and contractual income then depends upon the supply of entrepreneur ability in the society and the rapidity of diminishing returns from other factors applied to it, the size of the profit share increasing as the supply of ability is small and as the returns diminish more rapidly. ... The size of the profit share depends on whether entrepreneurs tend on the whole to overestimate or underestimate the prospects of business operations, being larger if they underestimate Knight (1921, 1971).

The income of any particular entrepreneur will tend to be higher with greater ability and more good luck, given the division of social income and its underlying factors as given above. The Knightian entrepreneur is not only remunerated with profit; the prestige of entrepreneurship and the satisfaction resulting from being one's own boss should also be considered when studying entrepreneurial income. Finally, as competition is assumed, the number of entrepreneurs operating in the market depends upon demand and supply of entrepreneurial services. Demand for entrepreneurs depends directly upon the supply of other productive services and on the ability of individual entrepreneurs. Furthermore, the supply of entrepreneurs involves the factors of ability, with the various elements therein included: willingness, power to give satisfactory guarantees, and the coincidence of these factors. Willingness plus power to give guarantees, not backed up by ability, will evidently lead to a dissipation of resources, while ability without the other two factors will be merely wasted Knight (1921, 1971).

In summary, the Knightian entrepreneur contributes savings to society by bearing all the uncertainty: he makes decisions for which he is responsible. He guarantees the factors of production their fixed remuneration. Entrepreneurship requires the ability to bear uncertainty as well as the availability of enough capital to pay the remunerations which have been guaranteed. Entrepreneurial services are remunerated by profit, a

residual payment, but also by prestige and job satisfaction. The amount of profit any particular entrepreneur makes, increases in his own ability and good luck and decreases in the degree of self-confidence that entrepreneurs have as a group. Entrepreneurial services are supplied if an individual is willing and possesses sufficient capital.

2.3. The Neo-Austrian View of Entrepreneurship

The questions that were not answered by the neo-classical movement led to a new movement which became known as the Neo-Austrian view. The model which was influenced by Joseph Schumpeter (1934) concentrated on human action in the context of an economy of knowledge. A general point of observation is the Austrian view of the market economy that differs from the standard view of economists. Neo-classicists analyze the market in a state of general equilibrium. Neo-Austrians consider it most unlikely that the market economy is close to a general equilibrium position at any time. They try to answer the question of how, if at all, market economies tend towards equilibrium. Neo-Austrians see such tendencies as arising out of the dynamics of discovery. Such discovery opportunities for pure profit, which express, in turn, errors stemming from 'utter ignorance.' Utter ignorance means unawareness of a basic lack of information.

Kirzner's point of view Kirzner gave the entrepreneur a pivotal position within the market process. Most of his ideas related to the entrepreneur can be found in his publication *Competition and Entrepreneurship* 1973.

One of our complaints concerning contemporary theories of price arises from their virtual elimination of entrepreneurship. What is required, I have argued, is a reformulation of price theory to readmit the entrepreneurial role to its rightful position as crucial to the very operation of the market Kirzner 1973.

Kirzner has clearly contributed to the Austrian mode of thinking as well as to the theory of entrepreneurship by stating that entrepreneurs are the persons in the economy who are alert to discover and exploit profit opportunities. They are, according to Kirzner, the equilibrating forces in the market process. Yet, the equilibrium position itself is never reached; entrepreneurs may have erred in their assessments concerning the presence of profit opportunities or may have completely overlooked them. Such errors are translated, in turn, into new opportunities for pure entrepreneurial gain and new errors in turn. Moreover, even successful entrepreneurial endeavors proceed against the background of spontaneously changing underlying conditions of supply and demand; such changes alter what needs to be discovered. Profit opportunities include making a profit out of a buying selling at one place and selling buying at the other; buying in one period and selling in the other and/or buying inputs and selling modified outputs.

Hence, entrepreneurs are likely to be producers as well. However, producers or others are entrepreneurs only if they make discoveries and if they also make a profit out of these discoveries. Production takes place within the firm. But, the firm, then, is that which results after the entrepreneur has completed some entrepreneurial decision-making, specifically the purchase of certain resources. ... The particular entrepreneur is no longer only a pure entrepreneur; he has become, as a result of earlier entrepreneurial decisions, an owner of resources Kirzner (1973).

Kirzner's entrepreneur requires no special ability or personality to carry out his function; the pure entrepreneur could even hire all the required labor and business talent. Entrepreneurship requires, however, a very special type of knowledge: The kind of knowledge required for entrepreneurship is to 'know where to look for knowledge.' The word which captures most closely this kind of 'knowledge' seems to be alertness. It is true that 'alertness' too may be hired; but one who hires an employee alert to possibilities of discovering knowledge has himself displayed knowledge of a still higher order. Entrepreneurial knowledge may be described as the 'highest order of knowledge' Kirzner (1973).

The entrepreneur only needs to perceive profit opportunities in an earlier stage than others. He needs to be alert. Entrepreneurs are the most alert persons to profit opportunities in the economy. They have, more than average, the ability to learn from mistakes in the sense of not perceiving the best opportunities. Exploiting profit opportunities, rather than discovering them, requires some additional characteristics. However, exploitation is not the entrepreneurial act itself. Once a profit opportunity has been discovered, one 'can capture the associated profits by innovating, changing and creating' Kirzner (1973). Hence, to be able to act upon profit opportunities adequately requires additional qualities such as creativeness and leadership. Entrepreneurship is not restricted to persons who own resources themselves. A profit opportunity may require the investment of capital. 'But it is still correct to insist that the entrepreneur qua entrepreneur requires no investment of any kind' Kirzner (1973). Funds are supplied by capitalists as long as the entrepreneur is in a position to finance the necessary interest payments. Kirzner's entrepreneur, however, still bears some uncertainty:

The longer the time before the venture's required outlay can be expected to bring hope for revenues; the less sure the entrepreneur is likely to be. The entrepreneurial activity as described here undoubtedly involves uncertainty and the bearing of risk Kirzner (1973).

Discovery is not accidental, but is inspired by the prospect of entrepreneurial profit. Hence, entrepreneurs are likely to be the most alert persons either by nature, or

because the profit incentive is more important to them than to others. Summing up, it is the systematic sequence of error ~in the entrepreneurial assessment of profit opportunities, profit opportunity, discovery, and correction, which constitutes the market process. It is a process which, in the light of continually changing supply and demand conditions, never ceases. This market process, in which the entrepreneur plays a predominant role as alert discoverer of profit opportunities, is responsible for short-run movement of prices and production decisions, as well as for long-term progress and growth. Such an entrepreneurial market process is, at the same time, a competitive process in the sense that it relies on the freedom of potential entrepreneurs to enter markets in order to compete for perceived available profit.

The unanswered questions of the neo-classical movement led to a new movement which became known as the Austrian Market process (AMP). The model which was influenced by Joseph Alois Schumpeter (1934) concentrated on human action in the context of an economy of knowledge. Schumpeter (1934) described entrepreneurship as a driver of market-based systems. In other words, an important function of an enterprise was to create something new which resulted in processes that served as impulses for the motion of market economy. Schumpeter concluded that an entrepreneur is an innovator and leader. But he is neither a risk-bearer, nor a manager or capitalist. The innovator is the engine of economic growth. He leads the economy away from its otherwise static equilibrium position and forces it to a higher equilibrium position. Innovations are endogenous developments in a dynamic economic system. Entrepreneurs are willing to innovate, due to the possession of some scarce motivating forces. Entrepreneurial activity and the accrued profit are not lasting. Entrepreneurship is a temporary condition for any person, unless he keeps on innovating.

Murphy, Liao & Welsch (2006) contend that the movement offered a logic dynamic reality. In explaining this, they point to the fact that knowledge is communicated throughout a market system (e.g. via price information), innovation transpires, entrepreneurs satisfy market needs, and system-level change occurs. If an entrepreneur knows how to create new goods or services, or knows a better way to do so, benefits can be reaped through this knowledge. Entrepreneurs effectuate knowledge when they believe it will procure some individually-defined benefits. The earlier neoclassical framework did not explain such activity; it assumed perfect competition, carried closed-system assumptions, traced observable fact data, and inferred repeatable observation-based principles. By contrast, Neo Austrian denied the assumptions that circumstances are repeatable, always leading to the same outcomes in an economic system. Rather, it held entrepreneurs are incentivized to use episodic knowledge (that is, possibly never seen before and never to be seen again), to generate value. Thus, the Neo Austrian was based on three main conceptualizations Kirzner, (1973). The first was the arbitraging

market in which opportunities emerge for given market actors as others overlook certain opportunities or undertake sub-optimal activity. The second was alertness to profit-making opportunities, which entrepreneurs discover and entrepreneurial advantage. The third conceptualization, following Say (1803) and Schumpeter (1934), was that ownership is distinct from entrepreneurship. In other words, entrepreneurship does not require ownership of resources, an idea that adds context to uncertainty and risk Knight, (1921). These conceptualizations show that every opportunity is unique and therefore previous activity cannot be used to predict outcomes reliably. The Neo Austrian model is not without criticisms. The first of the criticisms is that market systems are not purely competitive but can involve antagonist cooperation. The second is that resource monopolies can hinder competition and entrepreneurship. The third is that fraud /deception and taxes/controls also contribute to market system activity. The fourth is that private and state firms are different but both can be entrepreneurial and fifth, entrepreneurship can occur in non-market social situations without competition. Empirical studies by Acs and Audretsch (1988) have rejected the Schumpeterian argument that economies of scale are required for innovation. The criticisms of the Neo Austrian have given impetus to recent explanations from psychology, sociology, anthropology, and Management.

3. EMPIRICAL EVIDENCE OF DETERMINANTS OF SUCCESSFUL ENTREPRENEURSHIP FROM KEY THEORIES

This part of the paper will present the results of empirical evidence from researches undertaken in the United States of America and the Dutch which was reviewed by VAN PRAAG C. M (1999). The samples used can briefly be described as follows.

The US sample is drawn from the National Longitudinal Survey of Youth NLS-Y. It consists of a homogeneous group of 2244 white male labor force participants for whom all relevant information is available. They have been interviewed annually as of their early youth. I followed their records over a period of five years from 1985 to 1989. Over this period, 264 switches from wage employment to self-employment were observed. The 'start determinants' are estimated in a model that explains these switches. The 264 individuals that switched to self-employment constitute the sub- sample on which the duration model is estimated. Estimating the subsequent duration in self-employment results in the 'success determinants' of entrepreneurship, where success is defined as the duration of the entrepreneurial venture.

The Dutch sample, drawn from the so-called 'Brabant survey,' consists of 1763 complete observations, representing individuals who at one time or another participated in the labor force, who were all born in the years 1939 or 1940 and who all attended

primary school in the Dutch province of 'Noord-Brabant.' As 12-year-old pupils, these individuals were tested cognitive skill tests in 1952, and they were interviewed in 1983 and 1993 about their labor market positions and histories. In 1993, the questionnaire paid special attention to entrepreneurial experiences, motivations to start and the like. This time, a question about risk attitude was included too. It turned out that 258 individuals once started or acquired a firm; the remainder did not. This difference is explained by the equation from which the Dutch 'start determinants' were obtained. The 258 entrepreneurs also answered a question about entrepreneurial firm sizes. The answer has been used as the dependent variable in the equation which results in the Dutch determinants of entrepreneurial success. An extensive description of the datasets, the estimation models, and to what extent these particular empirical results represent other recent empirical results is found in De Wit and Van Winden (1989), Van Praag and Van Ophem (1995), Van Praag (1996), and Van Praag and Cramer (1998).

3.1. Theories Components compared with the Empirical Research Results

The result shows that Risk-aversion has a significantly negative effect on the choice for entrepreneurship. This corroborates the theories by Cantillon, Say, Marshall, and Knight. The possession of private capital helps to find the opportunity to start as an entrepreneur. However, capital-constrained individuals who find an opportunity to start perform equally well. The finding is in line with the observations by Say and Knight. Marshall and Knight mentioned the importance of intelligence to achieve success as an entrepreneur. The empirical results suggest that intelligence increases the probability to start, but not to attain success. Education which is correlated to intelligence on the contrary seems to affect entrepreneurial success positively though insignificantly so in the US sample. This gives some support for the relevant ideas by Marshall and Knight. Besides education, according to Marshall, family background would also affect a person's general ability and thereby his success as an entrepreneur. The data support Marshall's statement that having a father who is an entrepreneur affects the probability of becoming a successful entrepreneur. The empirical analyses suggest that knowledge of the industry and occupation increase the probability of success. This corroborates the theories by Say and Marshall. Schumpeter and Knight both stressed the importance of the motivating factors that make people start as entrepreneurs. The finding that unemployed individuals are as much inclined to start as employed individuals does not support Schumpeter's view that willingness to start increases when individuals have less alternative opportunity to achieve social distinction. The same applies to the insignificant effect of family background. The positive coefficient of the variable 'Start motivated by challenge' supports Knight's idea. Finally, the idea that self-confidence helps to become a successful entrepreneur ~Knight! is not supported by the data.

4. CONCLUSION

The aim of the paper has been to give an overview of some important classic contributions related to present and most likely future empirical research subjects in the field of entrepreneurship. The paper focuses on the determinants of successful entrepreneurship. From the above discussions it is clear that the field of entrepreneurship have some interesting and relevant theories which are underpinned by empirical research evidence. This development holds a rather brighter future for the study, research, and practice of entrepreneurship.

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