

Summary in English:

1. Generally it has been a purpose in elaborating this dissertation to analyse certain selected factors which are often left out in economic expositions, but which nevertheless in my view are of importance. More specifically the purpose has been to define an entrepreneurial concept and employ this as an explanatory element in an analysis of an economy with an exogenous technical development as well as the institutions: market, hierarchy, and an exogenous public sector.

The purpose of the dissertation is also to demonstrate how an entrepreneurial concept can be employed in a discussion of selected factors which respectively advance and restrain the growth of hierarchies in a market economy. The thesis of the dissertation is that in a market economy with technological development will be found a form of equilibrium between factors advancing the growth of hierarchies on one hand, and factors restraining the growth of hierarchies on the other hand.

2. The concept of entrepreneurship has a long tradition in economic theory. Therefore it is the view, advanced in this dissertation that an analysis of the concept of entrepreneurship demands a history of thought background. As described in the first chapter the entrepreneurial concept has with certainty been employed in economic theory since the edition of Cantillon's *Essai* in 1755, but receded into the background as a consequence of the neo-classical theories. In French tradition the concept entrepreneur was ignored because Walras after having defined *l'entrepreneur* as one of the four functions of the economy, omitted this function in his further formalization. The mathematical formalization in itself which Walras chose, has had a governing influence on the later development of theories. The English classics referred to the entrepreneur in verbal expositions, but had no terminology that was suitable as bearer of a tradition. E.g. Marshall's analysis of hierarchies has not set a

fashion, because he used a conceptual apparatus, which originally was developed with a view to setting up theories of distribution and value. One of the problems is that it is difficult functionally to distinguish management from labour.

The entrepreneurial concept is today used in a number of distinctively different meanings in connection with e.g. innovation, bearing of risk, leadership, and alertness. Use of the entrepreneurial concept therefore implies as a starting point a realization of the theory and working method within which it is used. The preliminary division proposed here implies a splitting up into eight categories according to whether the entrepreneurial concept is applied respectively in economics or business, theoretically or empirically, and about a person or a function. The categories stated are to a certain extent complementary.

It is demonstrated in the second chapter that the contributions from Estrup and Schumpeter can be regarded as complementary within the frame of Austrian theory. Schumpeter emphasizes the entrepreneur in explanation of disequilibrium-creating innovation, whereas Estrup regards the entrepreneur as an equilibrium-creating "dealer". In order to understand Schumpeter's entrepreneurial concept it is relevant to realize that Schumpeter defines his entrepreneurial concept as an essential part of the argumentation for his growth- and cycle-theory.

In the third chapter, among other things, a line of history of theory is demonstrated: Marshall - Coase - Williamson. Furthermore it is noted that Williamson's characterization of the market employing the concept *high powered incentives* - like the concept of the market in the contribution from Coase - is consistent with the Austrian view.

In the fourth chapter is accentuated that economists should be prudent in employing biological metaphors. For example it is demonstrated how Marshall impaired his economic theses by attaching them to a biological theory. Marshall's view is influenced by the fact that biologists at that time had still no knowledge of the genetically based doctrine about heredity.

3. The entrepreneur - in a market and in a hierarchy - is in the fifth chapter

defined as a function involving a process with complementary use of alertness (cf. Kirzner), judgement (cf. Casson) and under the behavioural assumption of satisficing (cf. Simon). Still, in a concrete situation it is not necessarily possible to decide which persons or roles exert the entrepreneurial function. It is the exertion in itself of alertness and judgement under satisficing that is the entrepreneur.

Subsequently in the fifth chapter a model is set up to illustrate how technical development is transformed into economic activity via an entrepreneurial function. The model illustrates the interaction between exogenous research, commercial R & D, entrepreneurial activity, and production. In the model the entrepreneurial function is not invisible in equilibrium. Essential results are that an industry without R & D cannot achieve continuous growth. A declining exogenous research will cause a decrease in the industrial R & D, production, and entrepreneurial activity. Besides, it appears from the model that the stability factors of the economy will increase if the exogenous research is significant in relation to the R & D of the industry. Also, the stability will be forwarded if the results of the exogenous research during only few periods are adopted by the R & D of the industry.

Further, the defined entrepreneurial function can enter into a dynamic analysis of factors advancing the growth of hierarchies. In the sixth chapter a concrete examination of firms under growth is referred to. The results are remarkably consistent with the defined entrepreneurial function. As a supplement to Williamson's contribution a model is set up to illustrate that the structure of incentives in a hierarchy stimulates the growth of the hierarchy. The independent contribution of the dissertation is in this connection that a hierarchy is a governance structure which - like a market - can be characterized by strong ex ante incentives.

The next two chapters contain a discussion of selected reasons - among many possible - why the growth of hierarchies is restrained. In the seventh chapter reasons are given why hierarchies have a tendency to maintain the strategies formed during the first phases after the foundation. Satisficing is possible because a firm can survive outside optimum, but at the same time the behavioural theory of satisficing offers an

explanation why competing hierarchies turn up. Changes in the institutions and routines of a hierarchy depend among other things on the possibility of the entrepreneurial function to overcome strategical barriers such as institutional inertia under limited rationality. This involves a challenge to educational policy. Of importance are also external factors and attention to the importance of succession in leadership. Essential reasons for recession or dissolution of hierarchies are changes in the possibilities of profit of the market which are incompatible with the institutions of the hierarchy, because the capability of adaption in a hierarchy will often lag behind the changes in the market.

From the eighth chapter appears that analysis of innovation under market-conditioned risks gains by a broader approach than the distribution in a population of different personal qualities. In the same way the risks of the market in connection with innovation involve a tendency to restriction in growth of the hierarchies, as it may be more difficult to offer sufficient incentives for innovation in the same organization than in two separate organizations.

My conclusion - which is consistent with the Austrian concept of the market as a process during which experience is built up - is that it takes a certain period of time to realize whether a certain business concept is profitable. Both hierarchical and financial institutions imply a tendency to prefer projects with a short perspective in time. At the same time there is a limitation of the number of risk-bearing innovations that a firm has financial and entrepreneurial capacity to enter into.

In connection with innovation the task is to employ a methodology by which erratic estimation as well as the consequences of erratic estimation are limited. By applying the defined entrepreneurial concept it is proposed that an innovation is split up into phases. Moreover consideration to economic growth as well as to external effects state a need for stimulation of innovation. This can be realized by development of mechanisms that at the same time minimize and tolerate errors under assessment of relevant external effects. In continuation of the model from the fifth chapter essential features of an innovation- and environmental policy with this purpose are given.

4. The model at the end of the sixth chapter is in an appendix compared to data from annual accounts. Use of data from annual accounts touches on a number of more profound problems concerning valuation conventions and the annual account as an institution. The independent contribution of the dissertation is that the randomness that to the external reader of the accounts are attached to annual accounts and methods of estimation can be met by aggregation. It is interesting that aggregation within uniform categories of growth entails distinct results.
