Chapter 1
Digital Economy and Knowledge Economics:
Implications on Economic Model

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ABSTRACT

The digitization of information has been one of the greatest stories of the last two decades. This paper seeks to explain the meaning of this process and how it affects already established models concerning trade and knowledge economics. This paper is based on the simple premise that knowledge is the most important resource, without which nothing can be done. The paper starts by looking at the competitive advantage theory that was largely promoted by Michael Porter whose works have greatly influenced the first part of this paper. The paper then discusses the ever more important role of knowledge due to competitive advantage theory and the digitalization of information. Finally the implications and discrediting the comparative advantage theory, this theory has no place in modern economic thinking. As we have more tools in our disposal, we must investigate the importance of wave theory as well as the true meaning of competition. It also looks into the greater role collaboration will play in the future. The paper briefly discusses the effects that the digitization of information will have over time.

INTRODUCTION

Need for a New Model

The digitization of information indeed has been revolutionary in every sense of the word. There has been arguments of new economic models coming to the forefront, some saying there needs to be a new economic model. Indeed Robert Nolan, in one of his writings in his blogspot PEHUB, titled his article, written on September 5 2008, as "Wanted: New Economic Models for Media in the Digital Age". The digital age has affected economics, and will continue to do so. However economists must be careful when they attempt to create new models. Unless work has not been done in a field, a model will be a gradual change to show the new realities. Quoting Robert Nolan

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again, "the new economic model will be more evolutionary than revolutionary…"

Understanding that the models which will come into the fore will be evolutionary, we must turn to an important paper written by Hal Varian back in 1997. Varian in this paper pointed out, *"most of the time you were a student you probably studied various canonical models: things like consumer choice, and producer choice, general equilibrium, game theory and so on. The professor probably told you that these were very general models that could encompass lots of special cases. Well, it was all true. Over the last fifty years economists have come up with some very general principles and models. Most likely your model is a special case of one of these general models."*

Therefore, one would not expect the digitization of information to bring about revolutionary changes in the modeling process. Instead, one should rather expect that there would be more clarification of truths already established and finally more shedding of theories that have no place in modern economic thought. Because the inconsistency of these theories with other theories have been established.

Knowledge and Competitiveness

The reason why all these explanations on their own are not consistent is because in the modern era in order to participate in the market you must produce something. Therefore Germany might have high wages whilst wages in Bangladesh are low for example, the German has access to knowledge to create goods to take to market whilst Bangladesh does not have the knowledge to create say a motor vehicle of the quality that BMW makes, therefore even with cheap labor Bangladesh has nothing to take to market. Japan and the USA have huge budget deficits but essentially they have the knowledge to make goods to take to the market. If one has the expertise to dominate a market how would a rising currency take away that knowledge if nobody else can make those products as well? In fact the rising currency illustrates how much in demand the goods of that country are. A currency would not appreciate if goods of that country were not in demand by other countries.

Incidentally misplaced thinking believing that moving manufacturing base from developed countries to less developed countries like Bangladesh had a huge role in causing the financial crunch that began in the USA in September 2008. Moving a plant from say USA to Thailand means that people in the USA will have less quality jobs, where will they get the money eventually to pay for houses when their real incomes are actually falling. The financial malaise that hit wall street started from the reduction of quality jobs in the USA, it did not start with the investment banks. What would have been better is that Thailand has its own knowledge that it uses to create products and exchange the result of that knowledge with the use knowledge created in the USA., but that is another paper.

Porter in his works understands the importance of knowledge throughout his book. Though the book was written back in 1990 and reflected the conditions then, much of his advise has been followed. "Factor creation is the most vibrant and effective in nations where there is widespread understanding of the importance of factor creation to economic prosperity and consensus about the need for sustained investment. Education and training, research, and infrastructure are viewed as vital in Germany, Japan, Korea, and Singapore. The issues have largely been given lip service in America and are still being debated in Britain. In Italy, Historical aversion to the central government has stunted factor creation and put limits on the potential to upgrade competitive advantages in industry" (Porter).

Countries like Britain have recently taken this advise to heart and one finds such institutions in the United Kingdom as the Institute of Knowledge Transfer, Science and Technology Facilities Council, and the Association for Uni-