Multi Type Dynamic Input-Output System And Lorentz Transformation

Topic:
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ï¼ˆAbstractï¼‰

Introduction
It is well known that we can repeatedly solve the inverse matrix, which is to mean that we can repeatedly use of the parallelogram law of diagonal on the coordinate geometry in order to obtain Leontief line.

First, there is enlightenment significance, when I solved the Nonlinear Model of the Dynamic Input-Output System (NMGDIOS) and obtained its optimal solution within Pontryagin maximum, with my paper entitled as "The Generalized Dynamic Input-Output Principle" for the 24th International Input-Output Conference, Seoul, Korea 2016, that Leontief line and the optimal solution had great consistency. It was not difficult to be found, while I compared them.
This shows that Leontief line and the optimal solution in Pontryagin maximum could be defined as the extreme limit of the input-output for the whole society; which it is like as â€œthe world lineâ€• in the Relativity.

Second, with a view to facilitating research, I can choose that a country exist only two types of the Linear Dynamic Input-Output System (LDIOS), as the starting point of my research. In which sectors of two types are changing, in material structure and in value component, of the ebb and flow with each other.

Third, this is surely right in mathematics that the present theory usually take Perron-Froubenius root for the corresponding solution for the multi-type\sector of LDIOS. But, as the evolution of the multi-type\sector of LDIOS, if combined with their changing of the ebb and flow with each other in material structure and in value component, I could have a deeper understanding to Perron-Froubenius root.

Fourth, How to show the existence and the transformation process of the LDIOS or NMGDIOS among different types in the geometry space or in multidimensional space? I have been puzzled for a long period of time.
While I respectively correspond to its extreme line one by one, according to the changes in material structure and in value component of LDIOS or NMGDIOS among different types, I see that the extreme line appear to change constantly with its rotation present a counterclockwise and its angle become bigger and bigger on Cartesian coordinate, as the sunlight left its trajectory on a corona, so as to complete one Lorentz transformation by one.

Fifth, on the premise of a number of assumptions, that pay attention to the scope of the intermediate consumption matrix A and of the investment matrix B, and whether meet the nonsingular matrix that satisfy as derivative, reversible, measurable nonnegative matrix, on the basis of building Jacobian matrix, as a work out its corresponding matrix with NMDIOS.
Then by solving the corresponding characteristic equation of the Jacobian matrix, as NMDIOS extremum area on its curved surface, in which it could be obtained the optimal linear approximation value in its extremum point. If the equation is a nonsingular matrix, the Jacobian matrix can be solved. As a result, there is a group of its characteristic roots which can be obtained an optimal linear approximation value at the extreme point on its curved surface as approximating to NMDIOS,

thus obtaining the optimal solution of Pontryagin maximum for NMDIOS1 and NMDIOS2 respectively, thus obtaining base solution matrix with its special solution, as its equilibriums of NMDIOS1 and of NMDIOS2 respectively.

In which I can be on the deductive analysis: 1) That is to expand NMDIOS from two types to multi-type of coexisting; 2) The constitute of the corresponding Jacobian matrix with NMDIOS, which can be extended to multiple optimization variables; 3) Based on its equilibrium solutions of NMDIOS1 and of NMDIOS2, which it can be extended a series of solutions containing the particular solution to the n system.

Final, as the optimal solution corresponds to the multi-type of NMDIOS, it can be drawn the corresponding curve of asymptote. Combined with the above extremum line, it can be realized the Lorentz transformation with the optimal solution, as the space of the phase diagram for the multi-type of NMDIOS.