**سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها**
گواهی ثبت مقاله در سیویلیکا
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## عنوان مقاله:

P-V-L Deep: A Big Data Analytics Solution for Now-casting in Monetary Policy

## محل انتشار:

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## خلاصه مقاله:

The development of new technologies has confronted the entire domain of science and industry with issues of big data's scalability as well as its integration with the purpose of forecasting analytics in its life cycle. In predictive analytics, the forecast of near-future and recent past - or in other words, the now-casting - is the continuous study of real-time events and constantly updated where it considers eventuality. So, it is necessary to consider the highly data-driven technologies and to use new methods of analysis, like machine learning and visualization tools, with the ability of interaction and connection to different data resources with varieties of data regarding the type of big data aimed at reducing the risks of policy-making institution’s investment in the field of IT. The main scientific contribution of this article is presenting a new approach of policy-making for the now-casting of economic indicators in order to improve the performance of forecasting through the combination of deep nets and deep learning methods in the data and features representation. In this regard, a net under the title of P-V-L Deep: Predictive Variational Auto Encoders - Long Short-term Memory Deep Neural Network was designed in which the architecture of variational auto-encoder was used for unsupervised learning, data representation, and data reconstruction; moreover, long short-term memory was adopted in order to evaluate now-casting performance of deep nets in time-series of macro-econometric variations. Represented and reconstructed data in the generative network of variational auto-encoder to determine the performance of long-short-term memory in the forecasting of the economic indicators were compared to principal data of the net. The findings of the research argue that reconstructed data which are derived from variational auto-encoder embody shorter training time and outperform of prediction in long short-term memory compared to principal data.

## کلمات کلیدی:

Big data analytics, Deep learning, Now-casting, monetary policy

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