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1.	Authors:	Eralda Dhamo (Gjika), Oriana Zaçaj, Edionada Gjika	
	Paper Title:	Combining Econometric and Time Series Models to Project Albanian Population (Projection for Years 2015- 2023)	
	<p><b>Abstract:</b> Albania is a small country in the Balkan region but with a key geographical position in the demographic movements in the region and in Europe. In the recent years the political and economic changes in Europe have significantly affected demographic indicators of the country. The population projection is one of the important issues in this moment. The number of births is decreasing, by other hand number of emigrants is increasing rapidly. At this moment population forecasting techniques are seen with interest. In this work we study many socioeconomic variables that may affect the total number of population in Albania. We propose two models which may be used to projected population in the upcoming years. The models combine multiple regression and time series models. The most important variables in the model were selected based on many indicators of the model (AIC, MAPE, MSE etc.) and graphical tests. The final model was selected based on several measures of accuracy and bias, and formal statistical tests of differences in errors by technique.</p> <p><b>Keywords:</b> population projection, time series, regression, socioeconomics, accuracy</p> <p><b>References:</b></p> <ol style="list-style-type: none"><li>1. Smith S. K. (1997), Further thoughts on simplicity and complexity in population projection models ,International Journal of Forecasting 13 (1997) 557-565 , Bureau of Economic and Business Research.</li><li>2. Long J.F. (1995), Complexity. accuracy, and utility of official population projections. Mathematical Population Studies 5. 203-216</li><li>3. Mahmoud, E.. (1984). Accuracy in forecasting: A survey. Journal of Forecasting 3. 139-159.</li><li>4. Makridakis. S., Hibon. M.. 1979. Accuracy of forecasting: An empirical investigation. Journal of the Royal Statistical Society A 142.97-145,</li><li>5. Ahlburg, D.A., 1995. Simple versus complex models: Evaluation. accuracy and combining. Mathematical Population Studies 5, 281-20</li><li>6. Makridakis. S., Winkler, R.L.. 1983. Averages of forecasts: Some empirical results. Management Science 29, 987-996.</li><li>7. Sanderson WC. (1998) "Knowledge Can Improve Forecasts: A Review of Selected Socioeconomic Population Projection Models" Population and Development Review. 1998;24 (Suppl.):88-117.</li><li>8. Meng Yi., Wang Zizheng., Sia Wai Leng (2011): Study of Mathematical Models for Population Projection;. Singapore 259-978</li><li>9. McLennan A.(2006): Population Growth in a Closed System, Oxford</li><li>10. Xhaja B., Dhamo E., (2011): Population projections: methodological issues and challenges in Albanian Population, 6TH ANNUAL MEETING OF INSTITUTE ALB-SHKENCA, Prishtina, 1-4 September,2011,Kosovo</li><li>11. Shumway H. R. &amp; Stoffer S. D. (2006): Time Series Analysis and Its Applications With R examples. Springer Second edition, ISBN: 978-0-387-75958-6</li><li>12. Meng Yi, Wang Zizheng, Sia Wai Leng (2011): Study of Mathematical Models for Population Projection;. Singapore 259 978.</li></ol>		
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	Paper Title:	Implementation of Rate Adaptation Algorithms for Vehicular Simulations in OMNeT++	
	<p><b>Abstract:</b> Rate adaptation (RA) is the process of dynamically switching data rates to match the channel conditions, with the goal of selecting the rate that will give a good throughput for the given channel condition. The two fundamental issues when designing a rate adaptation scheme are "when to increase and decrease the transmission rate". Rate Adaptation is a technique that enhances network performance. It is a process of alerting network nodes to change rate in respect to channel condition. Constant Bit Rate (CBR), Adaptive Auto Rate Fallback (AARF) , and Auto Rate Fallback (ARF) are the only Rate Adaptation Algorithms (RAAs) implemented in OMNeT++. In this paper, we implement, Onoe as new RAAs in OMNeT++ simulator. This is credit-based RAA that changes rate based on credit threshold accumulated.</p> <p><b>Keywords:</b> rate adaptation; wireless networks; OMNeT++;vehicular communication; IEEE802.11p; propagation phenomena; inetmanet</p> <p><b>References:</b></p> <ol style="list-style-type: none"><li>1. P. Shankar, T. Nadeem. J. Rosca , and I. Iftode. Context Aware Rate Selection for Vehicular Networks. Department of Computer Science, Rutgers University, IEEE, 2008, pp 1-10.</li><li>2. S. Wu. High Performance Rate Adaptation on IEEE 802.11 Networks. PhD Thesis, Auburn University, 2008, pp 34-60.</li><li>3. Kamerman , and L. Monteban. A High-Performance Wireless LAN for the Unlicensed Band. AT&amp;T Bell Laboratories Technical Journal, 1997, pp.118-133.</li><li>4. J. C. Bicket. "Bit-rate selection in wireless networks," Master's Thesis, MIT, 2005, pp. 39-31.</li><li>5. K. S. Nwizege, J. He, and M. Shedrack,. Optimizing Rate Algorithms in Wireless Networks. European Modelling and Simulation (EMS) , Madrid, 16-18 November, 2011, pp 2-6.</li><li>6. S . R. Saunders, and A. A. Zavala. Antennas and Propagation for Wireless Communication systems. John Wiley and Sons , Ltd, second edition, 2007, pp 172-178.</li><li>7. K. S. Nwizege, and J. He. ACARS. Adaptive Context Aware Rate Selection Algorithms in Vehicular Networks. International Journal of Convergence Information Technology , April 2013, pp 1-5.</li><li>8. S. C. J. Kim, S. Kim, and D. Qiao. CARA: Collision-Aware Rate Adaptation for IEEE 801.11 WLANs. IEEE Communication Society, 2006, pp 1-3.</li><li>9. K. S. Nwizege, and M. MacMammah. Performance Evaluation of Path Loss Exponents on Rate Algorithms in Vehicular Networks International Journal of Emerging Science and Engineering (IJESE), August 2013, vol.1, pp 103-108.</li><li>10. F. Karnadi, Z. H. Mo, and K.C. Lan. Rapid Generation of Realistic Mobility Models for VANET. March 2007, pp 2509-2513.</li></ol>		