

وزارة التعليم العالي والبحث العلمي

الجامعة المستنصرية

كلية الادارة والاقتصاد

قسم الاحصاء

مقارنة طرائق Holt-Winter التنبؤية للسلاسل الزمنية

رسالة مقدمة الى

مجلس كلية الادارة والاقتصاد في الجامعة المستنصرية

وهي جزء من متطلبات نيل درجة الماجستير في علوم الاحصاء

من قبل

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Abstract

It is known that the use of time-series model for forecasting based on that there is a repeated. But most of the time repeated style of phenomenon faces sudden, temporary, or permanent changes that we should take into consideration these potential changes occurred to the repeated style.

As a result a lot of adaptive method emerged either in exponential smoothing systematic approach or Box-Jencks approach that adapts forecasting pattern prepared for all potential and permanent changes that occur in repeated style of time series in a way that accomplishes the required response of the pattern and the changes authoritically and possibly.

In exponential smoothing systematic approach the most distinguished methods are Trigg and Leach method for constant pattern and Brown method for repeated style patterns. As for the seasonal pattern there were many attempts the one suggested by the researcher William in 1987 was the most important named as adaptive Holt-Winter.

The main goal of this study is to assess the performance of Adaptive H. W. method for forecasting in

1,2,3,4,5,6 periods in optimized constant and imoptimal constant as compared to standard H.W. method in optimized and imoptimized constant in case of unstable time series that it's repeated style faces permanent and temporary changes. We need to use simulation to generate these chains to setting private programmes by means standard H.W. and Adaptive H.W. Method Written in quick-Basic language.

This study included four chapters.

The *First Chapter* is about the purpose and concepts of control and backgrounds of the subject. *The Second Chapter* is about detailed explanations of practical side for adaptive and non adaptive methods and the used criteria to show how accurate the forecasting, and the *Third Chapter* is about experimental side, *Fourth Chapter* is about the results and recommendations.