



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	MS: 2012 BJMCS 2758
Title of the Manuscript:	STABILITY ANALYSIS AND HOPF BIFURCATION OF A SEIV EPIDEMIC MODEL WITH SATURATED INCIDENCE RATE

PART 2:

FINAL EVALUATOR’S comments on revised paper (if any)	Authors’ response to final evaluator’s comments
In the abstract, the author mentioned that the endemic equilibrium is locally and globally asymptotically stable. However, throughout the paper, the author just studied the disease-free equilibrium. The first two sentences of the second paragraph of the introduction are repeated in the middle of this paragraph. There are some mistakes in the proof of the Theorem 3.2. Moreover, for the last line of page 2, the author said “we extend the work of Cai and Li (2009)”, but in fact, the model (1.1) can be seen as a special case considered in the reference Cai and Li 2009 (set $\phi(I)$ in Cai and Li 2009 as $1+\alpha I / \{a_0\}$, and set β in Cai and 2009 as $\beta / \{a_0\}$).	The reviewer is right and the corrections had been made in the manuscript. The local stability of the endemic equilibrium has been included for your comment. The Theorem 3.2 has been removed and replaced by the global stability of the disease-free equilibrium through Lyapunov function. The author has successfully used two methods in calculating the basic reproduction number and they resulted into the same value. We have introduced the Lyapunov function to prove the global stability of the disease-free equilibrium and the effect of the rate at which vaccine wanes is also treated through numerical simulations.