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VEC

(Koopahi, 2003)

(Herdt, 1983; Mosher,1974; Kanazawa, 1983;
Gemmill & Elcher, 1973)

(Boonma,1974; Hocho,
.1983; Sharma, 1983)

.(Cline,1977)

.(Duraisami, 1990)

(Central

Bank, 2009)

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.(Mechanization Development Center,2009)

.(Amjadi & Chizari, 2006)

hmafee@gmail.com :

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1 - شاخص سطح (ضریب) مکانیزاسیون عبارتست از نسبت مجموع کل توان
کششی موجود به مجموع کل سطح اراضی کشاورزی (بدون احتساب اراضی آیش)
که واحد آن اسب بخار بر هکتار است.

y_1, \dots, y_T (DGP)¹
VAR

(Mechanization Development Center, 2009)

$$y_t = A_0 + A_1 y_{t-1} + \dots + A_p y_{t-p} + u_t \quad (1)$$

$E(u_t, u_{t-h}') = 0$ $E(u_t, u_t') = \Sigma u$
() (Lütkepohl, 2006; Chatfield, 2001)
: VAR

$$y_t = \sum_{i=1}^{\infty} \Xi_i y_{t-i} + u_t \quad (2)$$

(DGP) (2006) Yazdanshenas
I(1)

(2006) Yazdanshenas

VAR
 $A(z)$ $z = 1$
(EC)³

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putty – clay clay – clay

$$A_i \Delta y_t = \Pi y_{t-1} + \Gamma_1 \Delta y_{t-1} + \dots + \Gamma_p \Delta y_{t-p+1} + u_t \quad t \in N \quad (3)$$

$\Pi = -(A_0 - A_1 - \dots - A_p) = A(1)$
(Lütkepohl $\Gamma_i = -(A_{i+1} + \dots + A_p)$ ($i = 1, \dots, p-1$)
 Πy_{t-1} & Claessen, 1997)
 $r = \text{rk}(\Pi)$

(2007) Nabieian & Alavi Naeini

VECM EC-VAR
(Lütkepohl, 2006)

$$\Delta y_t = \Pi^* y_{t-1} + \sum_{j=1}^{t-1} \Theta_j \Delta y_{t-1} + u_t, \quad t \in n \quad (4)$$

1 . Data Generation Process (DGP)
2 . Nonsingular
3 . Error Correction or Equilibrium Correction (EC)

VEC

VAR

VEC

VAR

VEC

VAR

VAR

(AIC)

(SC)

(FPE)

(HQC)

(AR Root)

JB^v LM^v

(Mi)

(RAV)

(L)

(Plan)

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2 . Lagrange multiplier

3 . Jarque-Bera

1 . Augmented Dikey – Fuller

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VAR

VEC

VEC

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VECM

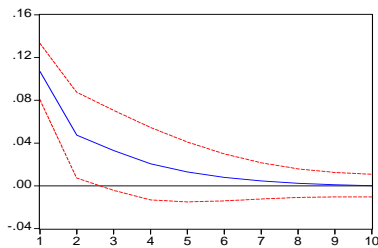
t		
/ ***	/ *	RAV
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/ **	/	ECT
/	/	C
/ *	/	Plan

* ** ***

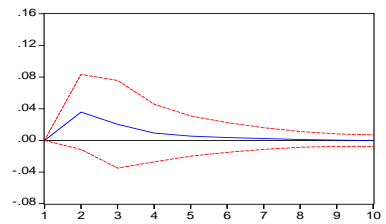
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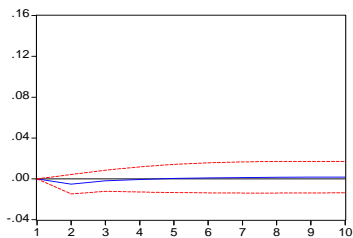
1. Transitory shocks
2. The shock with potentially permanent effects



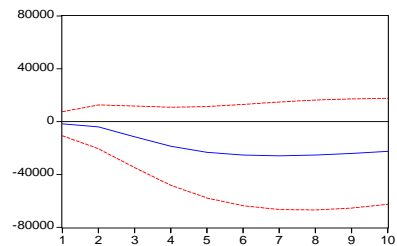
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نمودار افقی دوره‌ها بر حسب سال و محور عمودی عکس‌العمل آبی ضریب مکانیزاسیون و نیروی کار را به ترتیب بر حسب اسب بخار در هکتار و نفر نشان می‌دهد.

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