The Economics of Equitable Education: How Today's Loans, Access, and Training Affect Tomorrow's Economy

Saint Joseph's University Philadelphia, PA

April 17.'423:

Rcvtlem'V0J ctmgt"

Rtgukf gpv'cpf 'Ej kgh'Gzgewkxg'Qhhlegt'' Hgf gtcn'Tgugtxg'Dcpm'qh'Rj krcf grr j kc''



 $\label{thm:continuity} Vj g'xkgy u''gzrtguugf ''qf c \{ ''ctg''o \ \{ ''qy p''cpf ''pqv''pgeguuctkn (''vj qug''qh''vj g''Hgf gtcn'Tgugtxg''U \{ uvgo '' qt''vj g''Hgf gtcn'Qr gp''O ctmgv''Eqo o kwgg''*HQO E+0' \\$

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Uckpv'Iqugrjøu'Wpkxgtukv{" Rjkrcfgrrjkc.'RC"

Crth/39.'423: "

Rcvtleni'V0J ctngt"

Rtgulf gpv'cpf 'Ej kgh'Gz gewkxg'Qhhlegt"

Hgf gtcn'T gugtxg'Dcpni'qh'Rj kref grr j kc"

"

I qqf "o qtpkpi "cpf "y greqo g0'Køu'c'r rgcuwtg"\q"dg"cv'Uckpv'Iqugr j øu'Wpkxgtukv{0'

Vqf c {"Kqf" 'rkng" \q"f kuewuu'gxgt { "eqnrgi g"ugpkqt øu'hcxqtkxg" uwdlgev \cdot'uwf gpv'nqcpu0P qv'l wuv'cu'\j g { "r gt \ckp" \q' i g'kpf kxkf wcn "dw'\j g'ko r cev'\j g { ."cpf "q\j gt "kceguu'qh'\j g"gf weckqp" \cpf uecr g ."j cxg" qp"\j g'WU0'geqpqo { "qxgtcm" cpf "y j { "\j g"uwdlgev'ku'qpg'hqt" gxgt { "Co gtkecp" \q"eqpukf gt0'

Dghqtg''Ki gv''q''y cv.''Ky cpv''q''cng''ectg''qh''y q''j qwugnggr kpi ''kuuwgu0'Vj g'hktuv'ku''cp''kpvtqf wevkqp''q''

Hgf ''r tqvqeqn''cpf ''y cv'ku''y g''kuuwcpeg''qh''c''uvcpf ctf ''f kuencko gt<'Vj g''xkgy u''K'gzr tguu''vqf c{ ''ctg''

o kpg''cmpg''cpf ''f q''pqv''pgeguuctkn(''tghrgev''y qug''qh''cp{qpg''gnug''kp''y g''Hgf gtcn'T gugtxg''U{uvgo 0'

Vj g''ugeqpf ''ku''cp''kpvtqf wevkqp''vq''y g''Hgf ''kuugrh0'''

Kr tqo kug'kı'y km'dg'uj qtv."cpf 'pq. 'kı'y qpøv'dg'qp'yj g'\guv0'

Fed Overview

Vj g'Hgf gtcn'T gugtxg'uvcpf u'qwv'co qpi ''vj g'y qtrf øu'egpvtcn'dcpmu'hqt 'kuu'f gegpvtcnk gf 'uvtwewtg0'

J qy 'f q''{qwb'f gegpvtcnk g'c'egpvtcn'dcpmA'[qwb'guvcdrkuj ''34'tgi kqpcn'Dcpmu'cetquu'vj g'eqwpvt {''vj cv' ctg'kpf gr gpf gpv'qh ''dwb'y qtm'cmpi ukf g.''vj g'Hgf øu'Dqctf ''qh'I qxgtpqtu.''mqecvgf 'kp'Y cuj kpi vqp.''

F Œ 0''

Vj cv'untwewtg''y cu''guvcdrkuj gf ''322/r nxu''{gctu''ci q''vq''gpuwtg''yj cv''yj g'tgcrkxkgu''qp''yj g''i tqwpf 'kp''c'' xcuv''cpf ''xctkgf ''geqpqo { ''y qwrf ''dg'tgeqi pk| gf ''y j gp''pcvkqpcn'r qrke { ''ku''o cf g0'Ki'y cu''c''r tguekgpv'' f gekukqp."cu''yj g''rcpf uecr g''qh''yj g''eqwpvt { ''j cu''dgeqo g''gxgt''o qtg''f kxgtug''cpf ''gergevke''kp''yj g'' kpvgtxgpkpi ''egpwt { 0'Vj g''eqpegtpu''qh''yj g''tgukf gpwu''qh''yj g''Rj krcf grr j kc''Hgf øu''F knvtkev''ctg''qhvgp'' f khtgtgpv''yj cp. ''hqt''kpuvcpeg. ''yj g''F cmcu''Hgf øu0'Uq''yj gp''y g''cm'o ggv''q''f gekf g''r qrke { .''y j kej ''y g''f q'' gxgt { ''ukz ''y ggmu''qt''uq. ''gcej ''qh'wu''y cmu''kpvq''yj cv'f kuewuukqp''y ksj ''c''wpks wg''r gtur gevkxg0'Y gøtg''yj g'' xqkeg''hqt''qwt''tgi kqpu0'

Y j krg''y g'Hgf''y cu'etgcvgf''d{"cpf''ku''cpuy gtcdrg''vq'Eqpi tguu."kv'ku''cp''kpf gr gpf gpv'gpvkv{."y j kej "
uj kgrf u'kv'htqo 'r qrkvkecn'r tguuwtg0'Vj ku'ku''c''etwekcn'grgo gpv''vq''uchgi wctf kpi ''yj g''eqwpvt {øu''
geqpqo {0'[qw''qdxkqwun("f qpøv'y cpv'r gqr rg''o cmkpi "equo gvke'f gekukqpu''kp''yj g''uj qtv'vgto 'hqt''yj g''
ucng''qh'r qrkvkecn'gzr gf kgpe{0'[qw'y cpv'r gqr rg''y j q''nqqm''cv''yj g''o gf kwo "cpf''nqpi /vgto "
ko r nkecvkqpu''qh''y gkt "cevkqpu''cpf "o cmg''f gvgto kpcvkqpu''dcugf "qp''f cwc0'[qw'y cpv'r qrke{"y qpmu0'
[qw''o ki j v'pqv'y cpv''q''j cpi "qw''y kyj "wu''cv'c''r ctv{."dw''{qwetg''r tqdcdn{"r tgw{"j cr r {"y kyj "wu''
tgrgpvrguun{"cpcn{| kpi "'yj g''f cwc''qp"{qwt''dgj crh0'}

Vj g'Hgf 'j cu'c'j quv'qh'tgur qpukdktkkgu. 'htqo 'r tqxkf kpi 'ewttgpe { 'vq'dcpmu'vq'vpf gtvcnkpi 'tgugctej " vq'y qtmkpi 'y kj 'mqecn'eqo o wpkkgu'vq'gpeqwtci g'geqpqo ke'i tqy yj .'o qdktkv{ .'cpf 'uvcdktkv{ 0'Dwv' y g'o quv'y gm/mpqy p'cpf 'r tko ct { 'hwpevkqp'qh'yj g'Hgf 'ku'eqpf wevkpi 'o qpgvct { 'r qrke { 'kp'r wtuvkv'qh' qwt'f wcn'o cpf cvg.'y j kej 'ku'r tkeg'uvcdktkv{ 'cpf 'o czko wo 'go r m{ o gpv0'Qt.'kphrevkqp'cpf 'lqdu0''

Y g'y cpv'kphrcvkqp"vq"dg"urqy "cpf "uvgcf {"ô "qwt"ewttgpv'vcti gv'tcvg"ku"4"r gtegpv'ô "vq"nggr "r ceg" y kij "i tqy yj "y kij qwv'f gxcnvkpi "vj g"o qpg{"kp"{qwt"dcpm'ceeqwpv0D{"o czko wo "go r mq{o gpv."y g" o gcp."kp"cp"qxgtn("uko r nkhkgf "pwuj gm"vj cv'kh"{qwxtg"nqnhxpi "hqt"c"lqd"{qw'ecp"hxpf "qpg"tgrcvkxgn(" gcukn{0"Y g"o cng"pq"i wctcpvggu"vj cv'kvxm'dg"{qwt"f tgco "lqd."dwv'kp"c"uvtqpi "rcdqt"o ctngv."c" r c{ej gem'uj qwrf pxx'dg"j ctf "vq"eqo g"d{0"

Dgecwug''r gqr ng''o qxg''kp''cpf ''qw''qh''yi g'y qtnhqteg''cm'yi g''klo g.''wpgo r m{o gpv'y km'pgxgt''dg'| gtq0' Y j gp''{qw''i tcf wcvg.''hqt''kpuvcpeg.''cpf ''uvctv'mqnhpi 'hqt''lqdu.''{qwxtg''eqpukf gtgf ''wpgo r m{gf 'htqo '' yi g''klo g''{qw''uvctv'mqnhpi ''vq''yi g''klo g''{qw''hhpf ''qpg0'C''egtvckp''ngxgn'qh''ej wtp''ku'j gcnyi {0'

Cu'hqt'y j cvau'kf gen''y gtgau'e'uqtv'qh'o ei ke'pwo dgt'hqt'wpgo r m{o gpv'eengf ''y g'opewten'tevg0o''KV' ej epi gu'f gr gpf kpi ''qp''y g''o engwr ''qh''y g''geqpqo {.''epf 'y g''pgxgt'tgem{ ''npqy 'y j ev'y g''gzeev'

pwo dgt 'ku' wp kh'kvau' kp''y g't gct xkgy "o kttqt. ''y qwi j ''y g'f q''j cxg''gurko cvgu0'Vj g''ewttgpv'' wpgo r m{o gpv't cvg. ''603''r gtegpv. 'ku''cv'qt ''dgmy ''y g''pcwtcn't cvg''kp''o {''qy p''xkgy 0'''

Vj gtg"ctg"c'j quv'qh'qvj gt"hcevqtu'y g"nqqm'cv."kpenvf kpi "vj g"ncdqt"hqteg"r ctvkekr cvkqp"tcvg."j qy "htgs wgpvn{"r gqr rg"s wkv'lqdu."j qy "nqpi "lqdu'uvc{"qr gp."cpf "j qy "o cp{"pgv'pgy "lqdu"ctg"etgcvgf." lwnv'vq'pco g"c'hgy 0'

The Changing Labor Force

Uq. 'y j cv'f qgu'vj ku'cm'j cxg'vq'f q'y kj 'uwwf gpv'nqcpuA'

C'hektn{ "ki j v'nedqt" o ctngv'o gepu' y ev'lqdu' etg' tgne kxgn{ "edwpf epv." y j kej "kp' wtp." o gepu' hgy gt" gzeguu' y qtngtu0 Vj ev⁄u' i tgev'kh" {qwxtg''nqnhpi "hqt" e'lqd." dw' hguu' uq'kh" {qwxtg'' e'dwukpguu' y ev' y epw' 'vq" gzr epf 0 Cf f kkqpem{ ."kh' o quv'qh' y g'r qvgpvken' y qtnhqteg' ku' entgef { "qhh' y g'ukf grlpgu." kv' o gepu' y g'' nedqt' hqteg' kugh' ku' wprkngn{ "vq' i tqy "uki pkhkeepvn{ 0 Qpg'qh' y g'' o qtg' uvteki j vhqty etf " twrgu'qh' y g'' f kuo en'uekgpeg' ku' y ev' geqpqo ke'' i tqy y 'ku' deukeem{ 'i tqy y 'kp' y g'' nedqt' hqteg' r nwu'' i tqy y 'kp'' r tqf wevkxkv{ 0 Rtqf wevkxkv{ 'i tqy y 'ku' ewttgpvn{ 's wkwg'' nqy ."uq'kh' y g'' nedqt' o etngv' eepøv'' nggr 'r ceg. "geqpqo ke'' i tqy y 'y kn' uwhlgt0'

Whiko cvgn(."vj g"untgpi vj "qh'qwt"y qtmhqteg."cpf "kuu"vtclgevqt {."f gr gpf u"qp"c"eqwr rg"qh'hcevqtu."cpf "qpg"qh'vj qug"ku"j qy "ô "cpf "j qy "y gm'ô "kwu'gf wecvgf 0"

Uq"Ky cpv'\q"\cmi\qf c{"cdqwi'j g"y c{u'j g"gf wecvkqp"u{uvgo ."r ctvkewrctn{"r quv'ugeqpf ct{" gf wecvkqp."chhgev'ij g"WUU'rcdqt"o ctmgv0"

Nkng''cm'y kpi u.''y g'ewttgpv'uvcvg''qh'y g'Co gtkecp'y qtm'qteg'j cu''vq''dg''vcngp''kp''eqpvgzv.''cpf ''y gtg'' ctg''uqo g'ko r qtvcpv'hcegvu''vq''eqpukf gt''kp''vqf c {øu''o ctngv0'''

Hktuv'ku''y g"ghhgev'qh''vgej pqmi kecn'cf xcpego gpv'qp''y g'hcpf uecr g0'Vq''dg''uwtg.''y ku'j cu''dggp''c'' hcevqt''ukpeg'j wo cpkv{ 'hktuv'ugv'qwv'c'twf ko gpvct { "geqpqo { "dcugf "qp"dctvgt"cpf "vtcf g'o kngppkc" ci q0'Vj g''vtcpukvkqp''htqo "Uvqpg''Ci g''vq''Dtqp| g'Ci g''vq''Kqp''Ci g'tghrgevu''cp''gxqnwkqp''qh''y g'' vgej pqmi { "qh''y qug''vko gu0'Hcuv'hqty ctf kpi "vq''o qtg''tgegpv'gxgpvu.''y g'kpvtqf wevkqp''qh''y g''uvgco "gpi kpg.''y g''cuugo dn{ "rkpg.''cpf 'tghtki gtcvgf ''vtcpur qtv'y gtg''cm''y gkt''qy p''i co g/ej cpi kpi "ygej pqmi kgu'y cv'hwpf co gpvcm{ "cnvgtgf ''y g''y qtnf øu''dwukpguu''cpf ''geqpqo ke''eqo r qukvkqp0''

Dw'y j gtgcu'y g'qpeg'ucy 'y qug''yej pqmi kgu'cf xcpeg'cv'egpwtkguø'qt'f gecf guø'r cegu.'y g'ctg'' pqy 'kp''y g''y tqgu'qh'cf xcpego gpv'y cv'cr r gctu''\q''wr gpf 'kpf wwtkgu''qp''cp''cm quv'eqpuvcpv'dcuku0'

Kp"'y cv'ugpug."'y gtgøu"o qtg"ej cpi g"y ky kp"lqdu"cpf "kpf wuxtkgu."cpf "o qtg"pggf 'hqt"eqpxkpwcn' tgxtckpkpi "cpf "wr unkmkpi 0Cu"y g"rcdqt"o ctmgv"j cu"uvgcf kn("ko r tqxgf ."qpg"qh"y g"r tqdngo u'y cvøu" ctkugp "ku"c"o kuo cvej "qh"unkmu0Vj cv'etgcvgu"cp"kuuvg"y j gp"go r m{gtu"y cpv'vq"gzr cpf "y gkt" dwukpguugu"dwv'ecpøv'hkm'y g"lqdu'y g{"cntgcf {"j cxg0""

Cu'y g'hcdqt'o ctngv'eqpvkpwgu'\q'i gv'\ki j vgt''cpf '\ki j vgt.'y qtngtu'y ky ''ur gekhke'\unkmu'y km'hkngn{ ''dg'' j ctf gt''cpf ''j ctf gt''vq'hkpf 0'Cpf ''kh'dwukpguugu''ecpøv'hkm'y g''lqdu''y g{ ''j cxg''pqy .''y g{øtg''pqv'i qkpi '' vq''dg''cdng''\q''gzr cpf 0'

Vj g'ugeqpf 'f {pco ke'ku'f go qi tcr j keu.'y j kej .'ci ckp.'j cu'dggp'c'hcevqt''y tqwi j qw'j kuvqt {.'dw'ku'' f khhgtgpv'pqy ''y cp''cv'cp { ''r qkpv'dghqtg0Cu''c'r ctgpv'qh''y tgg''o kngppkcn'ej knf tgp.''Kco ''cewgn('' cy ctg''y cv''y g''{qwpi gt''i gpgtcwlqp'hggnu''wphcktn(''o cnki pgf 0'Dw'hqt''y ku'r ctwlewrct''r j gpqo gpqp''ô '' qpg''y cv'y km'r w'f kuvkpev'r tguuwtg''qp''y g''geqpqo { ''cpf ''y g''y qtmhqteg''ô ''{qw''ecp''f ktgev'dnco g'' hkto n(''cv''ōy g''qnf u0o''''

Vj g'dcd{"dqqo gtu'y km'dg''y g''rcti guv'i gpgtcvkqp''vq''f cvg''vq''j gcf 'kpvq'tgvktgo gpv0Vj g{"ctg''cnuq" nkxkpi 'mpi gt.'y j kej ."cu'c'dqqo gt''o {ugrh 'Kco "xgt{"o wej "kp'hcxqt"qh0Dw'kv'f qgu''o gcp''cp" wpr tgegf gpvgf "pwo dgt"qh'r gqr rg'nkxkpi "qwv'y gkt'r quv'y qtrnkpi "nkxgu'hqt''nqpi gt''y cp''y gøtg''wugf" vq0Vj cv'o gcpu''o qtg''r gqr rg''dgpghkxkpi "htqo 'O gf kectg."o qtg''r gqr rg''f tcy kpi "Uqekcn'Ugewtkv{."cpf" o qtg''r gqr rg''pggf kpi "cuukuvcpeg''y kyj "gxgt{yj kpi 'htqo 'f c{/vq/f c{"ectg'vq''tcpur qtvcvkqp0'Vj qug" rtqi tco u''ctg''hwpf gf 'kp''ncti g''r ctv'd{"yj g'Co gtkecp''y qtrnkqteg."cpf 'yj cv''cuukuvcpeg'y km'tgs wktg" o qtg''y qtrngtu''cv'c''ko g''y j gp''yj gtg''ctg''hgy gt''cpf 'hgy gt''nghv''vq''eqo g''qhh''yj g'ukf grkpgu''cpf 'kp'hkgrf u'' yj cv'tgs wktg''ur gekcn''gf wecvkqp''cpf 'unkmu0'

Hlpcm{."vj gtg"ku"vj g"r tkeg"qh"gf wecvkqp0"k%o "uwtg"{qwxxg"j gctf."htqo "vko g"vq"vko g."vj cv"vj kpi u"ctg" o wej "gcukgt"pqy "vj cp"vj g{"y gtg"kp"qwt"f c{0"Y g"j cf "vq"r qtg"vj tqwi j "vgzvdqqmu."y j krg"{qw"j cxg" Y km'r gf kc0"Y g"vqqm"r kewtgu"y kyj "hkro "cpf "eqwrf pøv"o cmg"vj go "mqqm"dgwgt"chwgt0"Y g"y cmgf "vq" uej qqn"kp"mpgg/f ggr "upqy 0"Wr "c"j km0"Dqvj "y c{u0"

Dw'qp''y ku'eqwpv.''y g'\ko gu''ctg'f gekf gf n{ ''y qtmkpi ''ci ckpuv'{qwt'hcxqt0'

O kngppkcnu'ctg''o wej "o qtg''nkngn(''y cp''qnf gt''i gpgtcvkqpu''vq''j cxg''vcngp''qw''c''uwxf gpv''nqcp0''Cpf'' dqy ''y g''uvkengt''r tkeg''qh''wkxkqp''cpf ''y g''f kneqwpvgf 'tcvg''j cxg'tkngp''hcuvgt''y cp''kpeqo gu''qxgt''y g'' r cuv'42"{gctu0Cv'y g''uco g''ko g.''uvcvg''hwpf kpi ''hqt''j ki j gt''gf wecvkqp''j cu''dggp''uvgcf kn(''f ko kpknj kpi 0' Vj cv'y cu''dqyj ''c''hcevqt''kp''y g''tkng''qh''wkxkqp''ô ''y qwi j ''egtvckpn(''pqv'kxu''gpvktg''ecwng''ô ''cpf ''y km'' rkngn(''eqpvkpwg''vq''i gv'y qtug''cu''y qug''f go qi tcr j ke''ttgpf u''Ko gpvkqpgf ''eqpvkpwg''vq''r rc { ''qwx0' Nqecn''uvcvg.''cpf ''hgf gtcn''dwf i gwu''y km''dg''gxgp''o qtg''r tgungf ''cu''hwpf u''kpetgcukpi n(''i q''vqy ctf'' tgvktgo gpv''dgpghkxu.''r gpukqpu.''cpf ''j gcnyj ''ectg0'''

Cu'wkkqpu'j cxg'tkugp. "cpf "o qtg'r gqr ng'j cxg'twctvgf "i qkpi "vq"eqmgi g. "dqvj "vj g'uj ctg"qh'uwf gpwl" y j q"vcmg"qw'mqcpu"cpf "vj g"cxgtci g"co qwpv'qh'f gdv'dqttqy gf "j cxg"i tqy p"uwduvcpvkcm{0'Kv'ku'pqy " c"rcti gt"r tqr qtvkqp"qh'eqpuwo gt"f gdv'vj cp"cwq"mqcpu"qt"etgf kv'ectf u="kp'hcev"kwu'ugeqpf "qpn{"vq" o qtvi ci gu0'

The Impact of Student Debt

Vj cv't gcrkv{ 'f qgupøv'l wuv'chhgev'y g'r gqr ng'j qnf kpi 'y g'f gdv'ô 'y qwi j 'kwou'qdxkqwun{ 'c'uki pkhecpv' kuuwg'hqt'y go 'ô 'kv'chhgewi'y g'y kf gt 'geqpqo { 'kp'c'xctkgv{ 'qh'y c { u0'}

Hktuv.''y g''dwtf gp''ku''uvctvkpi ''vq''ur tgcf ''cetquu''i gpgtcvkqpu''y ky kp''hco krkgu0'Ugeqpf .''kv''ku''chhgevkpi '' r gqr ngøu''nkhg''f gekukqpu''chvgt''uej qqr0'Cpf ''y ktf .''kv''ecp''gzcegtdcvg''kpeqo g'f kur ctkv{0'Cm'qh''y gug'' r nc{''c''tqrg''kp''y g''eqwpvt{øu''geqpqo ke''hwwtg0'''

Vcnkpi ''y qug'kp''wtp<hktuv.''y g''o wnki gpgtcvkqpcn'ghhgevu0T gugctej ''uj qy u''y cv'kp''y g''f gecf g'' ngcf kpi ''wr ''vq''4237.''y g''pwo dgt''qh''cf wnu''qxgt''y g''ci g''qh''82''y j q''vqqnh'qp''uwxf gpv'f gdv'hwn{ ''

¹ The Pew Charitable Trusts, *The Complex Story of American Debt: Liabilities in Family Balance Sheets* (2015), pewtrusts.org/~/media/assets/2015/07/reach-of-debt-report_artfinal.pdf.

s wcf twr ngf 0Tqwi j n("y tgg/s wctvgtu"qh"y qug"r gqr ng"cuuwo gf "y cv"f gdv'qp"dgj crh'qh"ej knf tgp"qt" i tcpf ej knf tgp0f"Vj cv"o gcpu"c"uwduvcpvkcn'pwo dgt "qh"r gqr ng"ctg"j qnf kpi "f gdv"y j q"ctg"gksj gt "hkxkpi " qp"—"qt"j gcf gf "vqy ctf "—"hkzgf "kpeqo gu"kp"y gkt "tgvktgo gpv0Ukpeg"y qug"i qnf gp"{gctu"ctg"rkngn{" vq"rcuv"nqpi gt "y cp"y gkt "r ctgpvuø"f kf ."y g{øtg"cnuq"o qtg"rkngn{" vq"gpeqwpvgt "kpetgcugf "ectg"equvu." y j kej "etgcvgu"cf f gf "r tguuwtg0P qv'qpn{" ku"y ku"c"hkpcpekcn'kuuwg"hqt "hco knkgu"vq"eqpvgpf "y ksj ."kv" kpetgcugu"y g"nkngnkj qqf "qh"f ghcwn0'

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² Consumer Financial Protection Bureau, *CFPB Warns Student Loan Servicing Problems Can Jeopardize Long-Term Financial Security for Older Borrowers* (2017), https://www.consumerfinance.gov/about-us/newsroom/cfpb-warns-student-loan-servicing-problems-can-jeopardize-long-term-financial-security-older-borrowers/.

³ Brent W. Ambrose, Larry Cordell, and Shuwei Ma, "The Impact of Student Loan Debt on Small Business Formation," Federal Reserve Bank of Philadelphia Working Paper 15-26 (2015).

⁴ Zachary Bleemer, Meta Brown, Donghoon Lee, Katherine Strair, and Wilbert van der Klaauw, "Echoes of Rising Tuition in Students' Borrowing, Educational Attainment, and Homeownership in Post-Recession America," Federal Reserve Bank of New York Staff Report 820 (2017).

⁵ Jesse Rothstein and Cecilia Elena Rouse, "Constrained After College: Student Loans and Early-Career Occupational Choices," *Journal of Public Economics* 95:1–2 (2011), pp. 149–163."

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⁶ Rajeev Darolia and Dubravka Ritter, "Strategic Default Among Private Student Loan Debtors: Evidence from Bankruptcy Reform," Federal Reserve Bank of Philadelphia Working Paper 17-38 (2017).

⁷ Alvaro A. Mezza, Daniel R. Ringo, Shane M. Sherlund, and Kamila Sommer, "On the Effect of Student Loans on Access to Homeownership," Finance and Economics Discussion Series 2016-010, Washington: Board of Governors of the Federal Reserve System, http://dx.doi.org/10.17016/FEDS.2016.010.

⁸ See, for example, Jaison R. Abel and Richard Deitz, "Do the Benefits of College Still Outweigh the Costs," *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, 20:3 (2014), and Mary C. Daly and Leila Bengali, "Is It Still Worth Going to College?" FRBSF Economic Letter (2014).

⁹ Douglas A. Webber, "Are College Costs Worth It: How Ability, Major, and Debt Affect the Returns to Schooling," *Economics of Education Review* 53 (2016).

¹⁰ Douglas A. Webber, "Projected Lifetime Earnings Broken Down by Major," http://www.doug-webber.com/expected_all.pdf.

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¹² Era Dabla-Norris, Kalpana Kochhar, Nujin Suphaphiphat, Frantisek Ricka, and Evridiki Tsounta, *Causes and Consequences of Income Inequality: A Global Perspective*, International Monetary Fund (2015).

¹¹ James J. Heckman and Tim D. Kautz, "Hard Evidence on Soft Skills," National Bureau of Economic Research Working Paper 18121 (2012), www.nber.org/papers/w18121.pdf.

students who scored the highest on the tests weren't any more likely to hold a patent than wealthy kids with below-average math scores. There were similar results for women, minorities, and people who lived in the southeast portion of the country. Since women alone make up more than half the population, the simple math tells us we're missing out on a lot of potential and productivity in a majority of the population.

Conclusion

The bottom line is that education is a good investment for the country as a whole. An educated workforce is a driver of growth and is crucial for sustained prosperity, and that's important for all of us.

It's vital that we ensure people can access the education they want and need and that we find ways to ease the financial burden for everyone. It's a fundamental element of the U.S. economy, and we'll be better off for it.

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¹³ Alex Bell, Raj Chetty, Xavier Jaravel, Neviana Petkova, and John Van Reenen, "Who Becomes an Inventor in America? The Importance of Exposure to Innovation," Stanford Institute for Economic Policy Research Working Paper 17-041 (2017).